

Zachary Bryan

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/11882308/publications.pdf>

Version: 2024-02-01

37
papers

1,749
citations

279701

23
h-index

360920

35
g-index

37
all docs

37
docs citations

37
times ranked

1377
citing authors

#	ARTICLE	IF	CITATIONS
1	On the origin of the 265-nm absorption band in AlN bulk crystals. Applied Physics Letters, 2012, 100, .	1.5	137
2	High internal quantum efficiency in AlGaIn multiple quantum wells grown on bulk AlN substrates. Applied Physics Letters, 2015, 106, .	1.5	135
3	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
4	The role of surface kinetics on composition and quality of AlGaIn. Journal of Crystal Growth, 2016, 451, 65-71.	0.7	112
5	Doping and compensation in Al-rich AlGaIn grown on single crystal AlN and sapphire by MOCVD. Applied Physics Letters, 2018, 112, .	1.5	107
6	Lasing and longitudinal cavity modes in photo-pumped deep ultraviolet AlGaIn heterostructures. Applied Physics Letters, 2013, 102, .	1.5	104
7	On compensation in Si-doped AlN. Applied Physics Letters, 2018, 112, .	1.5	97
8	Vacancy compensation and related donor-acceptor pair recombination in bulk AlN. Applied Physics Letters, 2013, 103, .	1.5	80
9	The effect of polarity and surface states on the Fermi level at III-nitride surfaces. Journal of Applied Physics, 2014, 116, .	1.1	75
10	Electronic Biosensors Based on III-Nitride Semiconductors. Annual Review of Analytical Chemistry, 2015, 8, 149-169.	2.8	66
11	Polarity control and growth of lateral polarity structures in AlN. Applied Physics Letters, 2013, 102, .	1.5	60
12	The role of the carbon-silicon complex in eliminating deep ultraviolet absorption in AlN. Applied Physics Letters, 2014, 104, .	1.5	59
13	Charge neutrality levels, barrier heights, and band offsets at polar AlGaIn. Applied Physics Letters, 2015, 107, .	1.5	59
14	Stimulated emission and optical gain in AlGaIn heterostructures grown on bulk AlN substrates. Journal of Applied Physics, 2014, 115, .	1.1	56
15	Compensation effects in GaN:Mg probed by Raman spectroscopy and photoluminescence measurements. Journal of Applied Physics, 2013, 113, .	1.1	49
16	Strain dependence on polarization properties of AlGaIn and AlGaIn-based ultraviolet lasers grown on AlN substrates. Applied Physics Letters, 2015, 106, .	1.5	48
17	Fermi level control of compensating point defects during metalorganic chemical vapor deposition growth of Si-doped AlGaIn. Applied Physics Letters, 2014, 105, 222101.	1.5	47
18	Ge doped GaN with controllable high carrier concentration for plasmonic applications. Applied Physics Letters, 2013, 103, .	1.5	45

#	ARTICLE	IF	CITATIONS
19	Schottky contact formation on polar and non-polar AlN. Journal of Applied Physics, 2014, 116, .	1.1	32
20	Homoepitaxial AlN thin films deposited on m-plane (111̄00) AlN substrates by metalorganic chemical vapor deposition. Journal of Applied Physics, 2014, 116, 133517.	1.1	30
21	Sapphire decomposition and inversion domains in N-polar aluminum nitride. Applied Physics Letters, 2014, 104, .	1.5	29
22	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
23	Fermi Level Control of Point Defects During Growth of Mg-Doped GaN. Journal of Electronic Materials, 2013, 42, 815-819.	1.0	25
24	High free carrier concentration in p-GaN grown on AlN substrates. Applied Physics Letters, 2017, 111, .	1.5	22
25	Exciton transitions and oxygen as a donor in m-plane AlN homoepitaxial films. Journal of Applied Physics, 2014, 115, .	1.1	20
26	Nonlinear analysis of vanadium- and titanium-based contacts to Al-rich n-AlGaN. Japanese Journal of Applied Physics, 2017, 56, 100302.	0.8	19
27	Growth and characterization of Al _x Ga _{1-x} N lateral polarity structures. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1039-1042.	0.8	15
28	Properties of AlN based lateral polarity structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 261-264.	0.8	11
29	Point defect management in GaN by Fermi-level control during growth. Proceedings of SPIE, 2014, .	0.8	10
30	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
31	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
32	Pinning of energy transitions of defects, complexes, and surface states in AlGaN alloys. Applied Physics Letters, 2020, 116, .	1.5	9
33	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
34	Structural characteristics of m-plane AlN substrates and homoepitaxial films. Journal of Crystal Growth, 2019, 507, 389-394.	0.7	5
35	Status and challenges in deep UV semiconductor lasers. , 2015, , .		3
36	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

#	ARTICLE	IF	CITATIONS
37	Advantages and limitations of UV optoelectronics on AlN substrates. , 2015, , .		0