

Zachary Bryan

List of Publications by Year in descending order

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37
papers

1,749
citations

279701

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360920

35
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37
all docs

37
docs citations

37
times ranked

1377
citing authors

#	ARTICLE	IF	CITATIONS
1	Pinning of energy transitions of defects, complexes, and surface states in AlGa _N alloys. Applied Physics Letters, 2020, 116, .	1.5	9
2	Structural characteristics of m-plane AlN substrates and homoepitaxial films. Journal of Crystal Growth, 2019, 507, 389-394.	0.7	5
3	On compensation in Si-doped AlN. Applied Physics Letters, 2018, 112, .	1.5	97
4	Doping and compensation in Al-rich AlGa _N grown on single crystal AlN and sapphire by MOCVD. Applied Physics Letters, 2018, 112, .	1.5	107
5	High free carrier concentration in p-GaN grown on AlN substrates. Applied Physics Letters, 2017, 111, .	1.5	22
6	Nonlinear analysis of vanadium- and titanium-based contacts to Al-rich n-AlGa _N . Japanese Journal of Applied Physics, 2017, 56, 100302.	0.8	19
7	The role of surface kinetics on composition and quality of AlGa _N . Journal of Crystal Growth, 2016, 451, 65-71.	0.7	112
8	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
9	Status and challenges in deep UV semiconductor lasers. , 2015, , .		3
10	A conduction model for contacts to Si-doped AlGa _N grown on sapphire and single-crystalline AlN. Journal of Applied Physics, 2015, 117, .	1.1	9
11	Long-term stability assessment of AlGa _N /GaN field effect transistors modified with peptides: Device characteristics vs. surface properties. AIP Advances, 2015, 5, 097102.	0.6	7
12	Charge neutrality levels, barrier heights, and band offsets at polar AlGa _N . Applied Physics Letters, 2015, 107, .	1.5	59
13	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
14	Electronic Biosensors Based on III-Nitride Semiconductors. Annual Review of Analytical Chemistry, 2015, 8, 149-169.	2.8	66
15	Advantages and limitations of UV optoelectronics on AlN substrates. , 2015, , .		0
16	High internal quantum efficiency in AlGa _N multiple quantum wells grown on bulk AlN substrates. Applied Physics Letters, 2015, 106, .	1.5	135
17	Nanostructure surface patterning of Ga _N thin films and application to AlGa _N /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
18	Strain dependence on polarization properties of AlGa _N and AlGa _N -based ultraviolet lasers grown on AlN substrates. Applied Physics Letters, 2015, 106, .	1.5	48

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19	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
20	Schottky contact formation on polar and non-polar AlN. Journal of Applied Physics, 2014, 116, .	1.1	32
21	The role of the carbon-silicon complex in eliminating deep ultraviolet absorption in AlN. Applied Physics Letters, 2014, 104, .	1.5	59
22	Exciton transitions and oxygen as a donor in <i>m</i> -plane AlN homoepitaxial films. Journal of Applied Physics, 2014, 115, .	1.1	20
23	Homoepitaxial AlN thin films deposited on <i>m</i> -plane (11 $\bar{2}$ 00) AlN substrates by metalorganic chemical vapor deposition. Journal of Applied Physics, 2014, 116, 133517.	1.1	30
24	Point defect management in GaN by Fermi-level control during growth. Proceedings of SPIE, 2014, , .	0.8	10
25	Stimulated emission and optical gain in AlGaN heterostructures grown on bulk AlN substrates. Journal of Applied Physics, 2014, 115, .	1.1	56
26	Sapphire decomposition and inversion domains in N-polar aluminum nitride. Applied Physics Letters, 2014, 104, .	1.5	29
27	The effect of polarity and surface states on the Fermi level at III-nitride surfaces. Journal of Applied Physics, 2014, 116, .	1.1	75
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	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	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
31	Fermi Level Control of Point Defects During Growth of Mg-Doped GaN. Journal of Electronic Materials, 2013, 42, 815-819.	1.0	25
32	Ge doped GaN with controllable high carrier concentration for plasmonic applications. Applied Physics Letters, 2013, 103, .	1.5	45
33	Compensation effects in GaN:Mg probed by Raman spectroscopy and photoluminescence measurements. Journal of Applied Physics, 2013, 113, .	1.1	49
34	Lasing and longitudinal cavity modes in photo-pumped deep ultraviolet AlGaN heterostructures. Applied Physics Letters, 2013, 102, .	1.5	104
35	Vacancy compensation and related donor-acceptor pair recombination in bulk AlN. Applied Physics Letters, 2013, 103, .	1.5	80
36	Polarity control and growth of lateral polarity structures in AlN. Applied Physics Letters, 2013, 102, .	1.5	60

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37	On the origin of the 265â€%nm absorption band in AlN bulk crystals. Applied Physics Letters, 2012, 100, .	1.5	137