

Pramod Reddy

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6489845/publications.pdf>

Version: 2024-02-01

84
papers

1,775
citations

331259

21
h-index

301761

39
g-index

84
all docs

84
docs citations

84
times ranked

1335
citing authors

#	ARTICLE	IF	CITATIONS
1	On electrical analysis of Al-rich p-AlGa _N films for III-nitride UV light emitters. Semiconductor Science and Technology, 2022, 37, 015003.	1.0	4
2	Systematic oxygen impurity reduction in smooth N-polar GaN by chemical potential control. Semiconductor Science and Technology, 2022, 37, 015005.	1.0	4
3	GaN lateral polar junction arrays with 3D control of doping by supersaturation modulated growth: A path toward III-nitride superjunctions. Journal of Applied Physics, 2022, 131, 015703.	1.1	8
4	The role of Ga supersaturation on facet formation in the epitaxial lateral overgrowth of GaN. Applied Physics Letters, 2022, 120, .	1.5	4
5	Doping and compensation in heavily Mg doped Al-rich AlGa _N films. Applied Physics Letters, 2022, 120, .	1.5	12
6	Large Area, Solar Blind, Sub-250 nm Detection AlGa _N Avalanche Photodiodes Grown on AlN Substrates. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	1.2	9
7	Point-defect management in homoepitaxially grown Si-doped GaN by MOCVD for vertical power devices. Applied Physics Express, 2022, 15, 051003.	1.1	6
8	Record >10% MV/cm mesa breakdown fields in Al _{0.85} Ga _{0.15} N/Al _{0.6} Ga _{0.4} N high electron mobility transistors on native AlN substrates. Applied Physics Letters, 2022, 120, .	1.5	9
9	Schottky contacts to N-polar GaN with SiN interlayer for elevated temperature operation. Applied Physics Letters, 2022, 120, .	1.5	0
10	Effects of temperature and oxygen partial pressure on electrical conductivity of Fe-doped Al ₂ O ₃ single crystals. Applied Physics Letters, 2022, 120, 182101.	1.5	0
11	Self-compensation in heavily Ge doped AlGa _N : A comparison to Si doping. Applied Physics Letters, 2021, 118, .	1.5	14
12	UV illumination effects on AlGa _N /GaN HEMTs for tunable RF oscillators. , 2021, , .		1
13	High Mg activation in implanted GaN by high temperature and ultrahigh pressure annealing. Applied Physics Letters, 2021, 118, .	1.5	28
14	Weak localization and dimensional crossover in compositionally graded Al _x Ga _{1-x} N. Applied Physics Letters, 2021, 118, .	1.5	6
15	On the characteristics of N-polar GaN Schottky barrier contacts with LPCVD SiN interlayers. Applied Physics Letters, 2021, 118, .	1.5	3
16	High n-type conductivity and carrier concentration in Si-implanted homoepitaxial AlN. Applied Physics Letters, 2021, 118, .	1.5	25
17	Native oxide reconstructions on AlN and GaN (0001) surfaces. Journal of Applied Physics, 2021, 129, .	1.1	4
18	Temperature dependence of electronic bands in Al/GaN by utilization of invariant deep defect transition energies. Applied Physics Letters, 2021, 119, 022101.	1.5	0

#	ARTICLE	IF	CITATIONS
19	On the Ge shallow-to-deep level transition in Al-rich AlGa _N . Journal of Applied Physics, 2021, 130, .	1.1	5
20	Study on avalanche breakdown and Poole-Frenkel emission in Al-rich AlGa _N grown on single crystal AlN. Applied Physics Letters, 2021, 119, .	1.5	10
21	A pathway to highly conducting Ge-doped AlGa _N . Journal of Applied Physics, 2021, 130, .	1.1	3
22	Status of the growth and fabrication of AlGa _N -based UV laser diodes for near and mid-UV wavelength. Journal of Materials Research, 2021, 36, 4638-4664.	1.2	25
23	The 2020 UV emitter roadmap. Journal Physics D: Applied Physics, 2020, 53, 503001.	1.3	289
24	Chemical treatment effects on Schottky contacts to metalorganic chemical vapor deposited n-type N-polar GaN. Journal of Applied Physics, 2020, 128, 064501.	1.1	9
25	Modulating the Stress Response of <i>E. coli</i> at GaN Interfaces Using Surface Charge, Surface Chemistry, and Genetic Mutations. ACS Applied Bio Materials, 2020, 3, 7211-7218.	2.3	2
26	Impact of impurity-based phonon resonant scattering on thermal conductivity of single crystalline GaN. Applied Physics Letters, 2020, 117, 082101.	1.5	7
27	Observation of carrier concentration dependent spintronic terahertz emission from <i>n</i> -Ga _N /NiFe heterostructures. Applied Physics Letters, 2020, 117, .	1.5	14
28	The nature of the DX state in Ge-doped AlGa _N . Applied Physics Letters, 2020, 116, .	1.5	14
29	The role of chemical potential in compensation control in Si:AlGa _N . Journal of Applied Physics, 2020, 127, .	1.1	34
30	High gain, large area, and solar blind avalanche photodiodes based on Al-rich AlGa _N grown on AlN substrates. Applied Physics Letters, 2020, 116, .	1.5	33
31	Role of polarity in SiN on Al/GaN and the pathway to stable contacts. Semiconductor Science and Technology, 2020, 35, 055007.	1.0	7
32	Control of passivation and compensation in Mg-doped GaN by defect quasi Fermi level control. Journal of Applied Physics, 2020, 127, .	1.1	24
33	Pinning of energy transitions of defects, complexes, and surface states in AlGa _N alloys. Applied Physics Letters, 2020, 116, .	1.5	9
34	Shallow Si donor in ion-implanted homoepitaxial AlN. Applied Physics Letters, 2020, 116, .	1.5	20
35	Impact of the effective refractive index in AlGa _N -based mid-UV laser structures on waveguiding. Japanese Journal of Applied Physics, 2020, 59, 091001.	0.8	5
36	(Invited) A Path Toward Vertical GaN Superjunction Devices. ECS Transactions, 2020, 98, 69-79.	0.3	6

#	ARTICLE	IF	CITATIONS
37	Oxidative Stress Transcriptional Responses of <i>Escherichia coli</i> at GaN Interfaces. ACS Applied Bio Materials, 2020, 3, 9073-9081.	2.3	1
38	Behavior of <i>E. coli</i> with Variable Surface Morphology Changes on Charged Semiconductor Interfaces. ACS Applied Bio Materials, 2019, 2, 4044-4051.	2.3	5
39	The polarization field in Al-rich AlGa _N multiple quantum wells. Japanese Journal of Applied Physics, 2019, 58, SCCC10.	0.8	23
40	Development of Near UV Laser Diodes. , 2019, , .		0
41	Interfacial Properties of Doped Semiconductor Materials Can Alter the Behavior of <i>Pseudomonas aeruginosa</i> Films. ACS Applied Electronic Materials, 2019, 1, 1641-1652.	2.0	3
42	Modified approach to modeling barrier inhomogeneity in Schottky diodes. Semiconductor Science and Technology, 2019, 34, 035004.	1.0	5
43	Quantum Well-Width Dependence Study on AlGa _N Based UVC Laser. , 2019, , .		0
44	Al Rich AlGa _N Based APDs on Single Crystal AlN with Solar Blindness and Room Temperature Operation. , 2019, , .		3
45	Design of AlGa _N -based quantum structures for low threshold UVC lasers. Journal of Applied Physics, 2019, 126, 223101.	1.1	19
46	On compensation in Si-doped AlN. Applied Physics Letters, 2018, 112, .	1.5	97
47	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
48	Noninvasive Stimulation of Neurotypic Cells Using Persistent Photoconductivity of Gallium Nitride. ACS Omega, 2018, 3, 615-621.	1.6	20
49	On Ni/Au Alloyed Contacts to Mg-Doped GaN. Journal of Electronic Materials, 2018, 47, 305-311.	1.0	17
50	Variably doped nanostructured gallium nitride surfaces can serve as biointerfaces for neurotypic PC12 cells and alter their behavior. RSC Advances, 2018, 8, 36722-36730.	1.7	7
51	Plasma enhanced chemical vapor deposition of SiO ₂ and SiN _x on AlGa _N : Band offsets and interface studies as a function of Al composition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, 061101.	0.9	6
52	Design Challenges for Mid-UV Laser Diodes. , 2018, , .		2
53	Au:Ga Alloyed Clusters to Enhance Al Contacts to P-type GaN. , 2018, , .		0
54	Improving the Conductivity Limits in Si Doped Al Rich AlGa _N . , 2018, , .		1

#	ARTICLE	IF	CITATIONS
55	Electrical and Structural Characterization of Si Implanted Homoepitaxially Grown AlN. , 2018, , .		0
56	N- and P- type Doping in Al-rich AlGa _N and AlN. ECS Transactions, 2018, 86, 25-30.	0.3	20
57	A thermodynamic supersaturation model for the growth of aluminum gallium nitride by metalorganic chemical vapor deposition. Journal of Applied Physics, 2018, 124, .	1.1	21
58	Point-Defect Nature of the Ultraviolet Absorption Band in AlN. Physical Review Applied, 2018, 9, .	1.5	41
59	On contacts to III-nitride deep-UV emitters. , 2018, , .		0
60	6 kW/cm ² UVC laser threshold in optically pumped lasers achieved by controlling point defect formation. Applied Physics Express, 2018, 11, 082101.	1.1	46
61	Bulk and Surface Electronic Properties of Inorganic Materials: Tools to Guide Cellular Behavior. Small Methods, 2018, 2, 1800016.	4.6	5
62	Bioelectronics communication: encoding yeast regulatory responses using nanostructured gallium nitride thin films. Nanoscale, 2018, 10, 11506-11516.	2.8	8
63	Defect-free Ni/GaN Schottky barrier behavior with high temperature stability. Applied Physics Letters, 2017, 110, .	1.5	38
64	Performance improvement of ohmic contacts on Al-rich n-AlGa _N grown on single crystal AlN substrate using reactive ion etching surface treatment. Applied Physics Express, 2017, 10, 071001.	1.1	11
65	(Invited) Material Considerations for the Development of III-Nitride Power Devices. ECS Transactions, 2017, 80, 29-36.	0.3	4
66	High free carrier concentration in p-GaN grown on AlN substrates. Applied Physics Letters, 2017, 111, .	1.5	22
67	Defect quasi Fermi level control-based CN reduction in GaN: Evidence for the role of minority carriers. Applied Physics Letters, 2017, 111, 152101.	1.5	14
68	Point defect reduction in MOCVD (Al)Ga _N by chemical potential control and a comprehensive model of C incorporation in GaN. Journal of Applied Physics, 2017, 122, .	1.1	47
69	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
70	Correlation between mobility collapse and carbon impurities in Si-doped GaN grown by low pressure metalorganic chemical vapor deposition. Journal of Applied Physics, 2016, 120, .	1.1	68
71	The effect of illumination power density on carbon defect configuration in silicon doped GaN. Journal of Applied Physics, 2016, 120, .	1.1	17
72	High temperature and low pressure chemical vapor deposition of silicon nitride on AlGa _N : Band offsets and passivation studies. Journal of Applied Physics, 2016, 119, .	1.1	22

#	ARTICLE	IF	CITATIONS
73	Fabrication and structural properties of AlN submicron periodic lateral polar structures and waveguides for UV-C applications. Applied Physics Letters, 2016, 108, .	1.5	32
74	Point defect reduction in wide bandgap semiconductors by defect quasi Fermi level control. Journal of Applied Physics, 2016, 120, .	1.1	48
75	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
76	Charge neutrality levels, barrier heights, and band offsets at polar AlGa _N . Applied Physics Letters, 2015, 107, .	1.5	59
77	KOH based selective wet chemical etching of AlN, Al _x Ga _{1-x} N, and GaN crystals: A way towards substrate removal in deep ultraviolet-light emitting diode. Applied Physics Letters, 2015, 106, .	1.5	66
78	Fermi level control of compensating point defects during metalorganic chemical vapor deposition growth of Si-doped AlGa _N . Applied Physics Letters, 2014, 105, 222101.	1.5	47
79	Schottky contact formation on polar and non-polar AlN. Journal of Applied Physics, 2014, 116, .	1.1	32
80	The effect of polarity and surface states on the Fermi level at III-nitride surfaces. Journal of Applied Physics, 2014, 116, .	1.1	75
81	Optical and I-V studies on Au-ZnO-ITO based UV-sensing devices. Proceedings of SPIE, 2012, , .	0.8	1
82	Synthesis and electrical behavior study of Mn ₃ O ₄ nanoceramic powder for low temperature NTC thermistor. Journal of Materials Science: Materials in Electronics, 2012, 23, 1891-1897.	1.1	12
83	Isotherm behavior studies of silica nanoparticles: Role of surfactant concentration and particle size. , 2012, , .		1
84	Sensing behavior study of silica-coated Ag nanoparticles deposited on glassy carbon toward nitrobenzene. Journal of Nanoparticle Research, 2012, 14, 1.	0.8	21