

Andrew Armstrong

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

79 papers	1,492 citations	22 h-index	35 g-index
82 ext. papers	1,717 ext. citations	2.9 avg, IF	4.68 L-index

#	Paper	IF	Citations
79	Role of self-trapped holes in the photoconductive gain of Gallium oxide Schottky diodes. <i>Journal of Applied Physics</i> , 2016 , 119, 103102	2.5	118
78	An AlN/Al _{0.85} Ga _{0.15} N high electron mobility transistor. <i>Applied Physics Letters</i> , 2016 , 109, 033509	3.4	89
77	Review Ultra-Wide-Bandgap AlGaN Power Electronic Devices. <i>ECS Journal of Solid State Science and Technology</i> , 2017 , 6, Q3061-Q3066	2	70
76	Vertical GaN Power Diodes With a Bilayer Edge Termination. <i>IEEE Transactions on Electron Devices</i> , 2016 , 63, 419-425	2.9	69
75	Interband tunneling for hole injection in III-nitride ultraviolet emitters. <i>Applied Physics Letters</i> , 2015 , 106, 141103	3.4	67
74	High voltage and high current density vertical GaN power diodes. <i>Electronics Letters</i> , 2016 , 52, 1170-1171	1.1	56
73	Defect-reduction mechanism for improving radiative efficiency in InGaN/GaN light-emitting diodes using InGaN underlayers. <i>Journal of Applied Physics</i> , 2015 , 117, 134501	2.5	54
72	Tunnel-injected sub-260 nm ultraviolet light emitting diodes. <i>Applied Physics Letters</i> , 2017 , 110, 201102	3.4	48
71	Tunnel-injected sub 290 nm ultra-violet light emitting diodes with 2.8% external quantum efficiency. <i>Applied Physics Letters</i> , 2018 , 112, 071107	3.4	45
70	Design and demonstration of ultra-wide bandgap AlGaN tunnel junctions. <i>Applied Physics Letters</i> , 2016 , 109, 121102	3.4	43
69	High Al-Content AlGaN Transistor With 0.5 A/mm Current Density and Lateral Breakdown Field Exceeding 3.6 MV/cm. <i>IEEE Electron Device Letters</i> , 2018 , 39, 256-259	4.4	40
68	Contribution of deep-level defects to decreasing radiative efficiency of InGaN/GaN quantum wells with increasing emission wavelength. <i>Applied Physics Express</i> , 2014 , 7, 032101	2.4	40
67	. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 2115-2122	2.9	32
66	Al _{0.85} Ga _{0.15} N/Al _{0.70} Ga _{0.30} N High Electron Mobility Transistors with Schottky Gates and Large On/Off Current Ratio over Temperature. <i>ECS Journal of Solid State Science and Technology</i> , 2017 , 6, Q161-Q165	2.9	29
65	Detection and modeling of leakage current in AlGaN-based deep ultraviolet light-emitting diodes. <i>Journal of Applied Physics</i> , 2015 , 117, 095301	2.5	28
64	Design of p-type cladding layers for tunnel-injected UV-A light emitting diodes. <i>Applied Physics Letters</i> , 2016 , 109, 191105	3.4	28
63	Operation Up to 500 °C of Al _{0.85} Ga _{0.15} N/Al _{0.7} Ga _{0.3} N High Electron Mobility Transistors. <i>IEEE Journal of the Electron Devices Society</i> , 2019 , 7, 444-452	2.3	27

62	Reflective metal/semiconductor tunnel junctions for hole injection in AlGa _N UV LEDs. <i>Applied Physics Letters</i> , 2017 , 111, 051104	3.4	26
61	Ohmic contacts to Al-rich AlGa _N heterostructures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017 , 214, 1600842	1.6	25
60	Planar Ohmic Contacts to Al _{0.45} Ga _{0.55} N/Al _{0.3} Ga _{0.7} N High Electron Mobility Transistors. <i>ECS Journal of Solid State Science and Technology</i> , 2017 , 6, S3067-S3071	2	24
59	High Temperature Operation of Al _{0.45} Ga _{0.55} N/Al _{0.30} Ga _{0.70} N High Electron Mobility Transistors. <i>ECS Journal of Solid State Science and Technology</i> , 2017 , 6, S3010-S3013	2	23
58	Enhanced light extraction in tunnel junction-enabled top emitting UV LEDs. <i>Applied Physics Express</i> , 2016 , 9, 052102	2.4	23
57	Simulations of Junction Termination Extensions in Vertical GaN Power Diodes. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 2291-2297	2.9	21
56	Multidimensional thermal analysis of an ultrawide bandgap AlGa _N channel high electron mobility transistor. <i>Applied Physics Letters</i> , 2019 , 115, 153503	3.4	21
55	. <i>IEEE Transactions on Nuclear Science</i> , 2015 , 62, 2912-2918	1.7	20
54	High-Voltage Regrown Nonpolar $\{m\}$ -Plane Vertical p-n Diodes: A Step Toward Future Selective-Area-Doped Power Switches. <i>IEEE Electron Device Letters</i> , 2019 , 40, 387-390	4.4	20
53	Depletion-Mode Photoconductivity Study of Deep Levels in GaN Nanowires. <i>Journal of Electronic Materials</i> , 2009 , 38, 484-489	1.9	19
52	Al-rich AlGa _N based transistors. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020 , 38, 020803	2.9	18
51	Laser diodes with 353 nm wavelength enabled by reduced-dislocation-density AlGa _N templates. <i>Applied Physics Express</i> , 2015 , 8, 112702	2.4	18
50	Enhancement-mode Al _{0.85} Ga _{0.15} N/Al _{0.7} Ga _{0.3} N high electron mobility transistor with fluorine treatment. <i>Applied Physics Letters</i> , 2019 , 114, 112104	3.4	15
49	Growth temperature dependence of Si doping efficiency and compensating deep level defect incorporation in Al _{0.7} Ga _{0.3} N. <i>Journal of Applied Physics</i> , 2015 , 117, 185704	2.5	15
48	AlGa _N polarization-doped field effect transistor with compositionally graded channel from Al _{0.6} Ga _{0.4} N to AlN. <i>Applied Physics Letters</i> , 2019 , 114, 052103	3.4	15
47	RF Performance of Al _{0.85} Ga _{0.15} N/Al _{0.70} Ga _{0.30} N High Electron Mobility Transistors With 80-nm Gates. <i>IEEE Electron Device Letters</i> , 2018 , 1-1	4.4	15
46	Visible-blind and solar-blind detection induced by defects in AlGa _N high electron mobility transistors. <i>Journal of Applied Physics</i> , 2018 , 123, 114502	2.5	14
45	X-ray topography characterization of gallium nitride substrates for power device development. <i>Journal of Crystal Growth</i> , 2020 , 544, 125709	1.6	14

44	Ultra-wide band gap AlGa _N polarization-doped field effect transistor. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 074103	1.4	14
43	Extreme Temperature Operation of Ultra-Wide Bandgap AlGa _N High Electron Mobility Transistors. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2019 , 32, 473-477	2.6	13
42	Investigation of dry-etch-induced defects in >600 V regrown, vertical, GaN, p-n diodes using deep-level optical spectroscopy. <i>Journal of Applied Physics</i> , 2019 , 126, 145703	2.5	13
41	Polarization-induced electrical conductivity in ultra-wide band gap AlGa _N alloys. <i>Applied Physics Letters</i> , 2016 , 109, 222101	3.4	13
40	Enhancement-mode AlGa _N channel high electron mobility transistor enabled by p-AlGa _N gate. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2019 , 37, 021208	1.3	12
39	Energy Frontier Research Center for Solid-State Lighting Science: Exploring New Materials Architectures and Light Emission Phenomena. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 13330-13345	3.8	12
38	Proton irradiation effects on minority carrier diffusion length and defect introduction in homoepitaxial and heteroepitaxial n-GaN. <i>Journal of Applied Physics</i> , 2017 , 122, 235705	2.5	12
37	High-frequency, high-power performance of AlGa _N -channel high-electron-mobility transistors: an RF simulation study. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, SCCD04	1.4	11
36	Influence of growth temperature and temperature ramps on deep level defect incorporation in m-plane GaN. <i>Applied Physics Letters</i> , 2013 , 103, 232108	3.4	11
35	Synchrotron X-ray topography characterization of high quality ammonothermal-grown gallium nitride substrates. <i>Journal of Crystal Growth</i> , 2020 , 551, 125903	1.6	11
34	Regrown Vertical GaN p _n Diodes with Low Reverse Leakage Current. <i>Journal of Electronic Materials</i> , 2019 , 48, 3311-3316	1.9	10
33	Spectroscopic investigations of band offsets of MgO/Al _x Ga _{1-x} N epitaxial heterostructures with varying AlN content. <i>Applied Physics Letters</i> , 2015 , 107, 102101	3.4	9
32	Interfacial Impurities and Their Electronic Signatures in High-Voltage Regrown Nonpolar m-Plane GaN Vertical p _n Diodes. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020 , 217, 1900757	1.6	9
31	Identification of the primary compensating defect level responsible for determining blocking voltage of vertical GaN power diodes. <i>Applied Physics Letters</i> , 2016 , 109, 183503	3.4	9
30	Highly nonlinear defect-induced carrier recombination rates in semiconductors. <i>Journal of Applied Physics</i> , 2013 , 114, 144502	2.5	8
29	Visible- and solar-blind photodetectors using AlGa _N high electron mobility transistors with a nanodot-based floating gate. <i>Photonics Research</i> , 2019 , 7, B24	6	8
28	Device-Level Multidimensional Thermal Dynamics With Implications for Current and Future Wide Bandgap Electronics. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2020 , 142,	2	8
27	Sensitivity of on-resistance and threshold voltage to buffer-related deep level defects in AlGa _N /GaN high electron mobility transistors. <i>Semiconductor Science and Technology</i> , 2013 , 28, 074020	1.8	7

26	Saturation Velocity Measurement of Al _{0.7} Ga _{0.3} N-Channel High Electron Mobility Transistors. <i>Journal of Electronic Materials</i> , 2019 , 48, 5581-5585	1.9	6
25	Evolution of AlGa _N deep level defects as a function of alloying and compositional grading and resultant impact on electrical conductivity. <i>Applied Physics Letters</i> , 2017 , 111, 042103	3.4	6
24	In situ scanning electron microscope electrical characterization of GaN nanowire nanodiodes using tungsten and tungsten/gallium nanoprobe. <i>Solid State Communications</i> , 2009 , 149, 1608-1610	1.6	6
23	Selective area regrowth and doping for vertical gallium nitride power devices: Materials challenges and recent progress. <i>Materials Today</i> , 2021 , 49, 296-296	21.8	6
22	Imaging the Impact of Proton Irradiation on Edge Terminations in Vertical GaN PIN Diodes. <i>IEEE Electron Device Letters</i> , 2017 , 38, 945-948	4.4	5
21	Quantitative and Depth-Resolved Investigation of Deep-Level Defects in InGa _N /Ga _N Heterostructures. <i>Journal of Electronic Materials</i> , 2011 , 40, 369-376	1.9	5
20	Sub 300 nm wavelength III-Nitride tunnel-injected ultraviolet LEDs 2015 ,		4
19	Low voltage drop tunnel junctions grown monolithically by MOCVD. <i>Applied Physics Letters</i> , 2021 , 118, 053503	3.4	4
18	Demonstration of >6.0-kV Breakdown Voltage in Large Area Vertical GaN p-n Diodes With Step-Etched Junction Termination Extensions. <i>IEEE Transactions on Electron Devices</i> , 2022 , 69, 1931-1937	7.9	4
17	III-Nitride ultra-wide-bandgap electronic devices. <i>Semiconductors and Semimetals</i> , 2019 , 102, 397-416	0.6	3
16	Fully transparent GaN homojunction tunnel junction-enabled cascaded blue LEDs. <i>Applied Physics Letters</i> , 2020 , 117, 051103	3.4	3
15	Ultra-Wide Bandgap Al _x Ga _{1-x} N Channel Transistors. <i>International Journal of High Speed Electronics and Systems</i> , 2019 , 28, 1940009	0.5	3
14	All-MOCVD-grown gallium nitride diodes with ultra-low resistance tunnel junctions. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 155103	3	3
13	Ohmic Contact-Free Mobility Measurement in Ultra-Wide Bandgap AlGa _N /AlGa _N Devices. <i>IEEE Electron Device Letters</i> , 2018 , 39, 55-58	4.4	2
12	In-Operando Spatial Imaging of Edge Termination Electric Fields in GaN Vertical p-n Junction Diodes. <i>IEEE Electron Device Letters</i> , 2016 , 1-1	4.4	2
11	III-nitride nanowires: novel materials for solid-state lighting 2011 ,		2
10	Development of High-Voltage Vertical GaN PN Diodes 2020 ,		2
9	Defect suppression in wet-treated etched-and-regrown nonpolar m-plane GaN vertical Schottky diodes: A deep-level optical spectroscopy analysis. <i>Journal of Applied Physics</i> , 2020 , 128, 185703	2.5	2

8	Al _{0.7} Ga _{0.3} N MESFET With All-Refractory Metal Process for High Temperature Operation. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 4278-4282	2.9	2
7	Sub-bandgap light-induced carrier generation at room temperature in 4H-SiC metal oxide semiconductor capacitors. <i>Applied Physics Letters</i> , 2011 , 99, 173502	3.4	1
6	High temperature operation to 500 °C of AlGa _N graded polarization-doped field-effect transistors. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2020 , 38, 033202	1.3	1
5	Etched-and-Regrown GaN pn-Diodes With 1600 V Blocking Voltage. <i>IEEE Journal of the Electron Devices Society</i> , 2021 , 9, 318-323	2.3	1
4	Measuring the minority carrier diffusion length in n-GaN using bulk STEM EBIC. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1842-1843	0.5	0
3	Deep-Level Characterization: Electrical and Optical Methods. <i>Power Electronics and Power Systems</i> , 2017 , 145-163	0.3	
2	Carrier Diffusion Lengths in Continuously Grown and Etched-and-Regrown GaN Pin Diodes. <i>IEEE Electron Device Letters</i> , 2021 , 42, 1041-1044	4.4	
1	High-resolution planar electron beam induced current in bulk diodes using high-energy electrons. <i>Applied Physics Letters</i> , 2021 , 119, 014103	3.4	