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## Pyroelectric properties of Al(In)GaN/GaN hetero- and quantum well structures

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#	Paper	IF	Citations
783	Photoelectrochemical hydrogen generation with linear gradient Al composition dodecagon faceted AlGa <sub>N</sub> /n-GaN electrode. <b>2014</b> , 22, A1853		
782	Piezoresponse force microscopy for polarity imaging of GaN. <b>2002</b> , 80, 4166-4168		75
781	Ohmic contact technology in III-V nitrides using polarization effects in cap layers.		1
780	Direct measurement of the polarization charge in AlGa <sub>N</sub> /Ga <sub>N</sub> heterostructures using capacitance-voltage carrier profiling. <b>2002</b> , 80, 3551-3553		38
779	Ohmic contact technology in III nitrides using polarization effects of cap layers. <i>Journal of Applied Physics</i> , <b>2002</b> , 92, 3740-3744	2.5	26
778	Three decades of our graduate research and education in compound semiconductor materials and devices.		
777	Characterization of 1.8-MeV proton-irradiated AlGa <sub>N</sub> /Ga <sub>N</sub> field-effect transistor structures by nanoscale depth-resolved luminescence spectroscopy. <b>2002</b> , 49, 2695-2701		31
776	Progress in High-Power, High Frequency AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs. <b>2002</b> , 194, 433-438		29
775	Piezoresponse force microscopy for piezoelectric measurements of III-nitride materials. <b>2002</b> , 246, 252-258		44
774	Band parameters for nitrogen-containing semiconductors. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 3675-3696	2.5	2147
773	Theoretical study of a Ga <sub>N</sub> -AlGa <sub>N</sub> high electron mobility transistor including a nonlinear polarization model. <i>IEEE Transactions on Electron Devices</i> , <b>2003</b> , 50, 315-323	2.9	28
772	The origins of leaky characteristics of Schottky diodes on p-GaN. <i>IEEE Transactions on Electron Devices</i> , <b>2003</b> , 50, 292-296	2.9	41
771	Correlation between strain, optical and electrical properties of InN grown by MBE. <b>2003</b> , 2818-2821		30
770	Investigation of 2D Electron Gas on AlGa <sub>N</sub> /Ga <sub>N</sub> Interface by Electroreflectance. <b>2003</b> , 329-333		9
769	Theoretical model for polarization superlattices: Energy levels and intersubband transitions. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 3972-3978	2.5	43
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766	Two-dimensional charge carrier systems for chemical sensors: AlGa <sub>N</sub> /Ga <sub>N</sub> and diamond.		
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762	Growth of non-polar a-plane and cubic In <sub>N</sub> on r-plane sapphire by molecular beam epitaxy. <b>2003</b> , 798, 283		
761	Improved AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistor using AlN interlayers. <b>2003</b> , 82, 4827-4829		24
760	Experimental study of perpendicular transport in weakly coupled Al <sub>x</sub> Ga <sub>1-x</sub> N/Ga <sub>N</sub> superlattices. <b>2003</b> , 83, 4975-4977		17
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455	Strain and Composition Determination in Semiconductor Heterostructures by High-Resolution X-Ray Diffraction. <b>2013</b> , 75-111		1
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452	Energy offset between valence band anti-crossing and optical polarization switching in semipolar InGaIn quantum wells. <b>2013</b> , 102, 232101		4
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449	Nonlinear piezoelectricity in wurtzite semiconductors. <b>2013</b> , 88,		49
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446	Improved injection efficiency in 290 nm light emitting diodes with Al(Ga)N electron blocking heterostructure. <b>2013</b> , 103, 031109		38
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440	Spin filter effect at room temperature in Ga <sub>N</sub> /GaMn <sub>N</sub> ferromagnetic resonant tunnelling diode. <b>2013</b> , 102, 242411		13
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436	GaN-on-Si Enhancement Mode Metal Insulator Semiconductor Heterostructure Field Effect Transistor with On-Current of 1.35 A/mm. <i>Japanese Journal of Applied Physics</i> , <b>2013</b> , 52, 090204	1.4	10
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433	Electrical characterization of <sup>60</sup> Co gamma radiation-exposed InAlN/Ga <sub>N</sub> high electron mobility transistors. <b>2013</b> , 31, 051210		10
432	Trap-assisted tunneling in InGa <sub>N</sub> /Ga <sub>N</sub> single-quantum-well light-emitting diodes. <b>2014</b> , 105, 133504		59
431	Dc and microwave noise characteristics of AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT with AlN and InGa <sub>N</sub> interlayers. <b>2014</b> ,		1
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428	Design and simulation of three wavelength terahertz Ga <sub>N</sub> quantum cascade laser. <b>2014</b> ,		
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426	Design of Ga <sub>N</sub> tri-gate HEMTs. <b>2014</b> ,		2
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421	Low-frequency noise in reverse-biased Schottky barriers on InAlN/AlN/GaN heterostructures. <b>2014</b> , 105, 192105		3
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314	Electromagnetically Induced Transparency in a Group III-V Nano-well for Terahertz Applications. <b>2017</b> , 329-334		
313	A Comparative Study of AlGa <sub>x</sub> N and InGa <sub>1-x</sub> N Back-Barriers in Ultrathin-Barrier AlN/GaN Heterostructures. <b>2017</b> , 46, 5278-5286		5
312	DC and microwave characteristics of Lg 50 nm T-gate InAlN/AlN/GaN HEMT for future high power RF applications. <b>2017</b> , 77, 163-168		16
311	Significant internal quantum efficiency enhancement of GaN/AlGa <sub>x</sub> N multiple quantum wells emitting at ~350 nm via step quantum well structure design. <b>2017</b> , 50, 245101		37
310	Gain mechanism and carrier transport in high responsivity AlGa <sub>x</sub> N-based solar blind metal semiconductor metal photodetectors. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 164502	2.5	64
309	Growth and Optical Properties of GaN-Based Non- and Semipolar LEDs. <b>2017</b> , 93-128		1
308	Improved on-state performance of AlGa <sub>x</sub> N/GaN Fin-HEMTs by reducing the length of the nanochannel. <b>2017</b> , 110, 193502		13
307	1.5-V-threshold-voltage Schottky barrier normally-off AlGa <sub>x</sub> N/GaN high-electron-mobility transistors with $f_T/f_{max}$ of 41/125 GHz. <i>Applied Physics Express</i> , <b>2017</b> , 10, 076501	2.4	3
306	Performance of back-illuminated (In <sub>0.09</sub> Ga <sub>0.91</sub> N)-based p-i-n photodetector. <i>Optical and Quantum Electronics</i> , <b>2017</b> , 49, 1	2.4	3
305	Structural and magnetic properties of Co-doped ZnO thin films grown by ultrasonic spray pyrolysis method. <i>Superlattices and Microstructures</i> , <b>2017</b> , 104, 553-569	2.8	24
304	Intersubband optical absorption between multi energy levels of electrons in InGa <sub>x</sub> N/GaN spherical core-shell quantum dots. <i>Superlattices and Microstructures</i> , <b>2017</b> , 102, 373-381	2.8	16
303	Nitride heterostructure optimization by simulation. <b>2017</b> , 468, 567-571		0
302	High-temperature carrier density and mobility enhancements in AlGa <sub>x</sub> N/GaN HEMT using AlN spacer layer. <b>2017</b> , 464, 175-179		10
301	Effect of well/barrier thickness ratio on strain relaxation in GaN/AlN superlattices grown on GaN/sapphire template. <b>2017</b> , 35, 062902		4
300	Flexible Gallium Nitride for High-Performance, Strainable Radio-Frequency Devices. <b>2017</b> , 29, 1701838		69
299	Group III Nitrides. <b>2017</b> , 1-1		7

298	Simulation study of InAlN/GaN high-electron mobility transistor with AlInN back barrier. <b>2017</b> , 26, 107301		12
297	Influence of the gate position on source-to-drain resistance in AlGa <sub>N</sub> /AlN/GaN heterostructure field-effect transistors. <b>2017</b> , 7, 085309		
296	Static and dynamic characteristics of L g 50 $\mu$ m InAlN/AlN/GaN HEMT with AlGa <sub>N</sub> back-barrier for high power millimeter wave applications. <b>2017</b> , 2, 515-522		6
295	Spatially-resolved optical and structural properties of semi-polar [Formula: see text] Al Ga N with x up to 0.56. <i>Scientific Reports</i> , <b>2017</b> , 7, 10804	4.9	10
294	Effect of self-heating on electrical characteristics of AlGa <sub>N</sub> / GaN HEMT on Si (111) substrate. <b>2017</b> , 7, 085015		34
293	Parasitic source resistance at different temperatures for AlGa <sub>N</sub> /AlN/GaN heterostructure field-effect transistors. <b>2017</b> , 26, 097104		
292	Enhancement of thermoelectric characteristics in AlGa <sub>N</sub> /GaN films deposited on inverted pyramidal Si surfaces. <b>2017</b> , 111, 021902		
291	Simulation design of high reverse blocking high-K/low-K compound passivation AlGa <sub>N</sub> /GaN Schottky barrier diode with gated edge termination. <i>Superlattices and Microstructures</i> , <b>2017</b> , 111, 1000-1009	2.8	3
290	III-Nitride Digital Alloy: Electronics and Optoelectronics Properties of the InN/GaN Ultra-Short Period Superlattice Nanostructures. <i>Scientific Reports</i> , <b>2017</b> , 7, 6671	4.9	22
289	Electrostatic built-in fields in wurtzite III-N nanostructures: Impact of growth plane on second-order piezoelectricity. <b>2017</b> , 96,		6
288	Improvement of transconductance and gate source capacitance of Al <sub>0.27</sub> Ga <sub>0.73</sub> N/GaN HEMT at 45nm gate length with In <sub>0.1</sub> Ga <sub>0.9</sub> N back-barrier. <b>2017</b> ,		
287	Noise characterization of enhancement-mode AlGa <sub>N</sub> graded barrier MIS-HEMT devices. <i>Superlattices and Microstructures</i> , <b>2017</b> , 112, 604-618	2.8	7
286	Localization landscape theory of disorder in semiconductors. III. Application to carrier transport and recombination in light emitting diodes. <b>2017</b> , 95,		68
285	Design of high performance normally-off dual junction gate AlGa <sub>N</sub> /GaN heterostructure field effect transistors for high voltage application. <i>Journal of Computational Electronics</i> , <b>2017</b> , 16, 748-755	1.8	4
284	Hot electron generation under large-signal radio frequency operation of GaN high-electron-mobility transistors. <b>2017</b> , 111, 013506		10
283	Simulation of real I-V characteristics of metal/GaN/AlGa <sub>N</sub> heterostructure based on the 12-EXT model of trap-assisted tunnelling. <b>2017</b> , 395, 122-130		3
282	Properties and Advantages of Gallium Nitride. <b>2017</b> , 1-26		5
281	Modeling of InGa <sub>N</sub> PV module using Matlab/Simulink. <b>2017</b> ,		1

280	Numerical modeling of temperature effects in InGaN double Hetero-junction p-i-n solar cells. <b>2017</b> ,		
279	MATLAB/Simulink based modeling of n-GaN/p-In <sub>0.25</sub> Ga <sub>0.75</sub> N solar cell. <b>2017</b> ,		
278	Momentum Space Engineering of GaN HETs for RF Applications Through Full-Band Monte Carlo Simulations. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 4442-4449	2.9	
277	Comprehensive compact electro-thermal GaN HEMT model. <b>2017</b> ,		2
276	Effect of III-Nitride polarization on photo-current in N-polar GaN/InGaN p-n. <b>2017</b> ,		
275	Low-temperature and pressure response of InAlN/GaN ring-shaped high electron mobility transistors. <b>2017</b> ,		
274	Dependence analysis of the GaN HEMT parameters for space application on the thickness AlGaIn barrier layer by numerical simulation. <b>2017</b> ,		2
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272	Dynamics of carrier tunneling and recombination in asymmetric coupled InGaIn multiple quantum wells. <i>Optics Express</i> , <b>2017</b> , 25, 24745-24755	3.3	10
271	AlN/GaN Digital Alloy for Mid- and Deep-Ultraviolet Optoelectronics. <i>Scientific Reports</i> , <b>2017</b> , 7, 11826	4.9	17
270	Control of short-channel effects in InAlN/GaN high-electron mobility transistors using graded AlGaIn buffer. <i>Superlattices and Microstructures</i> , <b>2018</b> , 116, 207-214	2.8	13
269	Ultra-Broadband Optical Gain in III-Nitride Digital Alloys. <i>Scientific Reports</i> , <b>2018</b> , 8, 3109	4.9	5
268	Meta-screening and permanence of polar distortion in metallized ferroelectrics. <b>2018</b> , 97,		24
267	Review of bias-temperature instabilities at the III-N/dielectric interface. <b>2018</b> , 82, 62-83		28
266	Numerical analysis of the reverse blocking enhancement in High-K passivation AlGaIn/GaN Schottky barrier diodes with gated edge termination. <i>Superlattices and Microstructures</i> , <b>2018</b> , 114, 143-153	2.8	2
265	Probing dynamic behavior of electric fields and band diagrams in complex semiconductor heterostructures. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 024301	2.5	5
264	A novel empirical I-V model for GaN HEMTs. <i>Solid-State Electronics</i> , <b>2018</b> , 146, 1-8	1.7	8
263	Emission and material gain spectra of polar compressive strained AlGaIn quantum wells grown on virtual AlGaIn substrates: Tuning emission wavelength and mixing TE and TM mode of light polarization. <i>Semiconductor Science and Technology</i> , <b>2018</b> , 33, 075003	1.8	4

262	Polarization engineered enhancement mode GaN HEMT: Design and investigation. <i>Superlattices and Microstructures</i> , <b>2018</b> , 119, 181-193	2.8	6
261	Tuning Electrical and Thermal Transport in AlGa <sub>N</sub> /Ga <sub>N</sub> Heterostructures via Buffer Layer Engineering. <b>2018</b> , 28, 1705823		11
260	Pyroelectric effect and lattice thermal conductivity of InN/GaN heterostructures. <b>2018</b> , 117, 111-116		4
259	Ohmic Contact-Free Mobility Measurement in Ultra-Wide Bandgap AlGa <sub>N</sub> /AlGa <sub>N</sub> Devices. <b>2018</b> , 39, 55-58		2
258	Effect of trapped charge in AlGa <sub>N</sub> /Ga <sub>N</sub> and AlGa <sub>N</sub> /InGa <sub>N</sub> /Ga <sub>N</sub> heterostructure by temperature dependent threshold voltage analysis. <i>Superlattices and Microstructures</i> , <b>2018</b> , 113, 147-152	2.8	1
257	Electrothermal studies of GaN-based high electron mobility transistors with improved thermal designs. <b>2018</b> , 116, 496-506		17
256	InGa <sub>N</sub> -based solar cells: a wide solar spectrum harvesting technology for twenty-first century. <b>2018</b> , 6, 83-96		13
255	Device characteristics of enhancement mode double heterostructure DH-HEMT with boron-doped Ga <sub>N</sub> gate cap layer for full-bridge inverter circuit. <b>2018</b> , 31, e2276		6
254	Optimization Problems of Nanosized Semiconductor Heterostructures. <b>2018</b> , 47, 583-588		2
253	Significant Carrier Extraction Enhancement at the Interface of an InN/p-GaN Heterojunction under Reverse Bias Voltage. <b>2018</b> , 8,		5
252	Effect of the ceria dopant on the structural and dielectric properties of ZnO semiconductors. <b>2018</b> , 3, 433-439		9
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246	Characterization of traps in InAlN by optically and thermally stimulated deep level defect spectroscopies. <i>Journal of Applied Physics</i> , <b>2018</b> , 124, 145703	2.5	2
245	Theory and Design of Electron Blocking Layers for III-N-Based Laser Diodes by Numerical Simulation. <b>2018</b> , 54, 1-11		7



244	Theoretical Evaluation of the Effects of Isolation-Feature Size and Geometry on the Built-In Strain and 2-D Electron Gas Density of AlGa <sub>N</sub> /Ga <sub>N</sub> Heterostructures. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 4800-4806	2.9	3
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234	Semiconductor Heterojunctions ?. <b>2018</b> ,		3
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228	Pyroelectric performances of 1-3 ferroelectric composites based on barium titanate nanowires/polyvinylidene fluoride. <b>2018</b> , 44, 19254-19261		6
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224	Pyroelectric effect and thermal conductivity of In <sub>N</sub> /Ga <sub>N</sub> heterostructures. <b>2018</b> ,		
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219	Effect of nonparabolicity on linear and nonlinear optical properties in Al <sub>x</sub> Ga <sub>1-x</sub> N/GaN single quantum well under external applied field. <b>2019</b> ,		
218	Pyroelectric effect in In <sub>x</sub> Ga <sub>1-x</sub> N/GaN heterostructure. <b>2019</b> ,		
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213	Thermal Design Considerations for III-N Vertical-Cavity Surface-Emitting Lasers Using Electro-Opto-Thermal Numerical Simulations. <b>2019</b> , 55, 1-8		2
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210	Theoretical Modeling of Triple-Barrier Resonant-Tunneling Diodes Based on AlGa <sub>N</sub> /Ga <sub>N</sub> Heterostructures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2019</b> , 216, 1900471	1.6	1
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208	Puzzle of non-surface related 2D electron gas in n-InN epitaxial samples. <i>Journal of Applied Physics</i> , <b>2019</b> , 126, 045705	2.5	1
207	Temperature Dependence of InGaN / GaN Multiple Quantum Well Solar Cells. <b>2019</b> , 157, 793-801		5
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179	Surface Potential based modeling of Sheet Charge Density and Estimation of Critical Barrier Thickness in AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT. <b>2019</b> ,		1
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