

# Tomas Palacios

## List of Publications by Year in Descending Order

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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.

195 papers	15,669 citations	60 h-index	123 g-index
213 ext. papers	18,463 ext. citations	7.8 avg, IF	6.68 L-index

#	Paper	IF	Citations
195	Self-Aligned E-mode GaN p-Channel FinFET with $I_{ON} > 100$ mA/mm and $I_{ON}/I_{OFF} > 10^7$ . <i>IEEE Electron Device Letters</i> , <b>2022</b> , 1-1	4.4	5
194	Wet-based digital etching on GaN and AlGaIn. <i>Applied Physics Letters</i> , <b>2022</b> , 120, 022101	3.4	1
193	Tungsten-Gated GaN/AlGaIn p-FET with $I_{max} > 120$ mA/mm on GaN-on-Si. <i>IEEE Electron Device Letters</i> , <b>2022</b> , 1-1	4.4	6
192	Healing of donor defect states in monolayer molybdenum disulfide using oxygen-incorporated chemical vapour deposition. <i>Nature Electronics</i> , <b>2022</b> , 5, 28-36	28.4	7
191	Emerging GaN technologies for power, RF, digital, and quantum computing applications: Recent advances and prospects. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 160902	2.5	15
190	GaN FinFETs and trigate devices for power and RF applications: review and perspective. <i>Semiconductor Science and Technology</i> , <b>2021</b> , 36, 054001	1.8	14
189	Flexible and high-performance electrochromic devices enabled by self-assembled 2D TiO/MXene heterostructures. <i>Nature Communications</i> , <b>2021</b> , 12, 1587	17.4	44
188	Self-Align-Gated GaN Field Emitter Arrays Sharpened by a Digital Etching Process. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 422-425	4.4	4
187	GaN 2.0: Power FinFETs, Complementary Gate Drivers and Low-Cost Vertical Devices <b>2021</b> ,		4
186	SynCells: A 60 $\mu$ m Electronic Platform with Remote Actuation for Sensing Applications in Constrained Environments. <i>ACS Nano</i> , <b>2021</b> , 15, 8803-8812	16.7	2
185	Resonance-Enhanced Excitation of Interlayer Vibrations in Atomically Thin Black Phosphorus. <i>Nano Letters</i> , <b>2021</b> , 21, 4809-4815	11.5	2
184	Ultralow contact resistance between semimetal and monolayer semiconductors. <i>Nature</i> , <b>2021</b> , 593, 211-214	30.4	154
183	Performance Estimation of GaN CMOS Technology <b>2021</b> ,		3
182	Switching Performance Analysis of Vertical GaN FinFETs: Impact of Interfin Designs. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , <b>2021</b> , 9, 2235-2246	5.6	11
181	Vertical GaN Power Devices: Device Principles and Fabrication Technologies Part I. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 3200-3211	2.9	8
180	Designing artificial two-dimensional landscapes via atomic-layer substitution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	9
179	Impact of AlO Passivation on the Photovoltaic Performance of Vertical WSe Schottky Junction Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 57987-57995	9.5	8

178	Opportunities and Challenges of Ambient Radio-Frequency Energy Harvesting. <i>Joule</i> , <b>2020</b> , 4, 1148-1152	7.8	10
177	Barrier heights and Fermi level pinning in metal contacts on p-type GaN. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 213506	3.4	9
176	Synergistic Roll-to-Roll Transfer and Doping of CVD-Graphene Using Parylene for Ambient-Stable and Ultra-Lightweight Photovoltaics. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2001924	15.6	32
175	Deep-Learning-Enabled Fast Optical Identification and Characterization of 2D Materials. <i>Advanced Materials</i> , <b>2020</b> , 32, e2000953	24	21
174	. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 3960-3971	2.9	32
173	Chemical sensor systems based on 2D and thin film materials. <i>2D Materials</i> , <b>2020</b> , 7, 022002	5.9	23
172	Realization of 2D crystalline metal nitrides via selective atomic substitution. <i>Science Advances</i> , <b>2020</b> , 6, eaax8784	14.3	30
171	Regrowth-Free GaN-Based Complementary Logic on a Si Substrate. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 820-823	4.4	42
170	Field-induced Acceptor Ionization in Enhancement-mode GaN p-MOSFETs <b>2020</b> ,		8
169	On the use of graphene to improve the performance of concentrator III-V multijunction solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2020</b> , 28, 60-70	6.8	3
168	Degradation Mechanisms of GaN-Based Vertical Devices: A Review. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2020</b> , 217, 1900750	1.6	3
167	First Demonstration of GaN Vertical Power FinFETs on Engineered Substrate <b>2020</b> ,		3
166	Prospects for Wide Bandgap and Ultrawide Bandgap CMOS Devices. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 4010-4020	2.9	38
165	Two-dimensional MoS-enabled flexible rectenna for Wi-Fi-band wireless energy harvesting. <i>Nature</i> , <b>2019</b> , 566, 368-372	50.4	164
164	Superior Performance of 5-nm Gate Length GaN Nanowire nFET for Digital Logic Applications. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 874-877	4.4	11
163	Asymmetric hot-carrier thermalization and broadband photoresponse in graphene-2D semiconductor lateral heterojunctions. <i>Science Advances</i> , <b>2019</b> , 5, eaav1493	14.3	27
162	p-Channel GaN Transistor Based on p-GaN/AlGaIn/GaN on Si. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 1036-1039	4.1	56
161	Photoelectric Synaptic Plasticity Realized by 2D Perovskite. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1902538	15.6	77

160	Leakage and breakdown mechanisms of GaN vertical power FinFETs. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 163503	3.4	24
159	Demonstration of lateral field-effect transistors using Sn-doped $\text{E}(\text{AlGa})_2\text{O}_3$ (010). <i>Japanese Journal of Applied Physics</i> , <b>2019</b> , 58, SBBD12	1.4	19
158	Paraffin-enabled graphene transfer. <i>Nature Communications</i> , <b>2019</b> , 10, 867	17.4	122
157	Additive manufacturing of patterned 2D semiconductor through recyclable masked growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 3437-3442	11.5	25
156	Heterogeneous Integration of 2D Materials and Devices on a Si Platform <b>2019</b> , 43-84		2
155	ON-Resistance in Vertical Power FinFETs. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 3903-3909	2.9	17
154	Nitrogen-Polar Polarization-Doped Field-Effect Transistor Based on $\text{Al}_{0.8}\text{Ga}_{0.2}\text{N}/\text{AlN}$ on SiC With Drain Current Over 100 mA/mm. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 1245-1248	4.4	19
153	Direct Observation of Symmetry-Dependent Electron-Phonon Coupling in Black Phosphorus. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 18994-19001	16.4	10
152	Characterization of charge trapping mechanisms in GaN vertical Fin FETs under positive gate bias. <i>Microelectronics Reliability</i> , <b>2019</b> , 100-101, 113488	1.2	7
151	Switching Performance Evaluation of 1200 V Vertical GaN Power FinFETs <b>2019</b> ,		4
150	First Demonstration of a Self-Aligned GaN p-FET <b>2019</b> ,		14
149	Giant intrinsic photoresponse in pristine graphene. <i>Nature Nanotechnology</i> , <b>2019</b> , 14, 145-150	28.7	36
148	MOVPE growth of nitrogen- and aluminum-polar AlN on 4H-SiC. <i>Journal of Crystal Growth</i> , <b>2018</b> , 487, 50-56	1.6	27
147	Chemiresistive Graphene Sensors for Ammonia Detection. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 16169-16176	9.5	67
146	MOVPE growth of N-polar AlN on 4H-SiC: Effect of substrate miscut on layer quality. <i>Journal of Crystal Growth</i> , <b>2018</b> , 487, 12-16	1.6	15
145	Repeated roll-to-roll transfer of two-dimensional materials by electrochemical delamination. <i>Nanoscale</i> , <b>2018</b> , 10, 5522-5531	7.7	22
144	Correction: Large-scale sensor systems based on graphene electrolyte-gated field-effect transistors. <i>Analyst, The</i> , <b>2018</b> , 143, 580	5	
143	720-V/0.35-m $\Omega\text{cm}^2$ Fully Vertical GaN-on-Si Power Diodes by Selective Removal of Si Substrates and Buffer Layers. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 715-718	4.4	54

142	The 2018 GaN power electronics roadmap. <i>Journal Physics D: Applied Physics</i> , <b>2018</b> , 51, 163001	3	527
141	AlN metal-semiconductor field-effect transistors using Si-ion implantation. <i>Japanese Journal of Applied Physics</i> , <b>2018</b> , 57, 04FR11	1.4	30
140	Planar Nanostrip-Channel Al <sub>2</sub> O <sub>3</sub> /InAlN/GaN MISHEMTs on Si With Improved Linearity. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 947-950	4.4	20
139	Frequency Response of Graphene Electrolyte-Gated Field-Effect Transistors. <i>Sensors</i> , <b>2018</b> , 18,	3.8	13
138	MoS <sub>2</sub> Phase-junction-based Schottky Diodes for RF Electronics <b>2018</b> ,		5
137	Gallium nitride vertical power devices on foreign substrates: a review and outlook. <i>Journal Physics D: Applied Physics</i> , <b>2018</b> , 51, 273001	3	109
136	Materials and processing issues in vertical GaN power electronics. <i>Materials Science in Semiconductor Processing</i> , <b>2018</b> , 78, 75-84	4.3	76
135	Large-Area 1.2-kV GaN Vertical Power FinFETs With a Record Switching Figure of Merit. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 1-1	4.4	50
134	N-polar AlN buffer growth by metal-organic vapor phase epitaxy for transistor applications. <i>Applied Physics Express</i> , <b>2018</b> , 11, 101002	2.4	11
133	High electrical conductivity and carrier mobility in oCVD PEDOT thin films by engineered crystallization and acid treatment. <i>Science Advances</i> , <b>2018</b> , 4, eaat5780	14.3	113
132	CVD Technology for 2-D Materials. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 4040-4052	2.9	23
131	<b>2018</b> ,		6
130	High-Performance GaN Vertical Fin Power Transistors on Bulk GaN Substrates. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 509-512	4.4	162
129	Bright Room-Temperature Single-Photon Emission from Defects in Gallium Nitride. <i>Advanced Materials</i> , <b>2017</b> , 29, 1605092	2.4	66
128	Hot Electron Transistor with van der Waals Base-Collector Heterojunction and High-Performance GaN Emitter. <i>Nano Letters</i> , <b>2017</b> , 17, 3089-3096	11.5	55
127	GaN Nanowire n-MOSFET With 5 nm Channel Length for Applications in Digital Electronics. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 859-862	4.4	33
126	Trench formation and corner rounding in vertical GaN power devices. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 193506	3.4	59
125	High Temperature Terahertz Detectors Realized by a GaN High Electron Mobility Transistor. <i>Scientific Reports</i> , <b>2017</b> , 7, 46664	4.9	26

124	Enhancement of responsivity for a transistor terahertz detector by a Fabry-Pérot resonance-cavity. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 162101	3.4	7
123	Direct optical detection of Weyl fermion chirality in a topological semimetal. <i>Nature Physics</i> , <b>2017</b> , 13, 842-847	16.2	184
122	Planar-Nanostrip-Channel InAlN/GaN HEMTs on Si With Improved $g_m$ and $f_{T}$ Linearity. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 619-622	4.4	22
121	Role of Molecular Sieves in the CVD Synthesis of Large-Area 2D MoTe <sub>2</sub> . <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1603491	15.6	46
120	High-Performance 500 V Quasi- and Fully-Vertical GaN-on-Si pn Diodes. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 248-251	4.4	61
119	Reduction of on-resistance and current crowding in quasi-vertical GaN power diodes. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 163506	3.4	32
118	Impact of 2D-Graphene on SiN Passivated AlGaIn/GaN MIS-HEMTs Under Mist Exposure. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 1441-1444	4.4	1
117	. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 3126-3131	2.9	17
116	Vertical GaN Junction Barrier Schottky Rectifiers by Selective Ion Implantation. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 1097-1100	4.4	96
115	1200 V GaN vertical fin power field-effect transistors <b>2017</b> ,		53
114	Large signal linearity enhancement of AlGaIn/GaN high electron mobility transistors by device-level $V_t$ engineering for transconductance compensation <b>2017</b> ,		4
113	Nanostructured GaN transistors <b>2017</b> ,		2
112	GaN HEMTs with multi-functional p-diamond back-barriers <b>2016</b> ,		1
111	Ultrasmall Mode Volumes in Plasmonic Cavities of Nanoparticle-On-Mirror Structures. <i>Small</i> , <b>2016</b> , 12, 5190-5199	11	39
110	Design, Modeling, and Fabrication of Chemical Vapor Deposition Grown MoS Circuits with E-Mode FETs for Large-Area Electronics. <i>Nano Letters</i> , <b>2016</b> , 16, 6349-6356	11.5	102
109	Synthesis of High-Quality Large-Area Homogenous 1TPMoTe from Chemical Vapor Deposition. <i>Advanced Materials</i> , <b>2016</b> , 28, 9526-9531	24	88
108	MoS Field-Effect Transistor with Sub-10 nm Channel Length. <i>Nano Letters</i> , <b>2016</b> , 16, 7798-7806	11.5	283
107	Automatic graphene transfer system for improved material quality and efficiency. <i>Scientific Reports</i> , <b>2016</b> , 6, 21676	4.9	31

106	A Rational Strategy for Graphene Transfer on Substrates with Rough Features. <i>Advanced Materials</i> , <b>2016</b> , 28, 2382-92	24	63
105	Transport Properties of a MoS <sub>2</sub> /WSe <sub>2</sub> Heterojunction Transistor and Its Potential for Application. <i>Nano Letters</i> , <b>2016</b> , 16, 1359-66	11.5	317
104	Edge plasmons and cut-off behavior of graphene nano-ribbon waveguides. <i>Optics Communications</i> , <b>2016</b> , 370, 226-230	2	20
103	Large-scale sensor systems based on graphene electrolyte-gated field-effect transistors. <i>Analyst</i> , <b>2016</b> , 141, 2704-11	5	15
102	Parallel Stitching of 2D Materials. <i>Advanced Materials</i> , <b>2016</b> , 28, 2322-9	24	161
101	Polarity in GaN and ZnO: Theory, measurement, growth, and devices. <i>Applied Physics Reviews</i> , <b>2016</b> , 3, 041303	17.3	85
100	Study of RF-circuit linearity performance of GaN HEMT technology using the MVSG compact device model <b>2016</b> ,		10
99	Novel GaN trench MIS barrier Schottky rectifiers with implanted field rings <b>2016</b> ,		46
98	Beyond Thermal Management: Incorporating p-Diamond Back-Barriers and Cap Layers Into AlGaN/GaN HEMTs. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 2340-2345	2.9	19
97	Vertical GaN power FET on bulk GaN substrate <b>2016</b> ,		12
96	High-Performance WSe <sub>2</sub> Complementary Metal Oxide Semiconductor Technology and Integrated Circuits. <i>Nano Letters</i> , <b>2015</b> , 15, 4928-34	11.5	163
95	Origin and Control of OFF-State Leakage Current in GaN-on-Si Vertical Diodes. <i>IEEE Transactions on Electron Devices</i> , <b>2015</b> , 62, 2155-2161	2.9	122
94	Synthesis of large-area multilayer hexagonal boron nitride for high material performance. <i>Nature Communications</i> , <b>2015</b> , 6, 8662	17.4	298
93	Graphene-Based Thermopile for Thermal Imaging Applications. <i>Nano Letters</i> , <b>2015</b> , 15, 7211-6	11.5	57
92	Large-Area Synthesis of High-Quality Uniform Few-Layer MoTe <sub>2</sub> . <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 11892-5	16.4	248
91	Design space and origin of off-state leakage in GaN vertical power diodes <b>2015</b> ,		51
90	X-Ray Spectroscopic Investigation of Chlorinated Graphene: Surface Structure and Electronic Effects. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 4163-4169	15.6	32
89	Room-temperature ballistic transport in III-nitride heterostructures. <i>Nano Letters</i> , <b>2015</b> , 15, 1070-5	11.5	20

88	Graphene/MoS2 hybrid technology for large-scale two-dimensional electronics. <i>Nano Letters</i> , <b>2014</b> , 14, 3055-63	11.5	472
87	Analytical thermal model for HEMTs with complex epitaxial structures <b>2014</b> ,		4
86	A Current-Voltage Model for Graphene Electrolyte-Gated Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 3971-3977	2.9	26
85	Two-dimensional materials for electronic applications. <i>MRS Bulletin</i> , <b>2014</b> , 39, 711-718	3.2	76
84	MIT virtual source GaNFET-high voltage (MVSG-HV) model: A physics based compact model for HV-GaN HEMTs. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2014</b> , 11, 848-852		26
83	Impact of Water-Assisted Electrochemical Reactions on the OFF-State Degradation of AlGaN/GaN HEMTs. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 437-444	2.9	47
82	Flexible graphene electrode-based organic photovoltaics with record-high efficiency. <i>Nano Letters</i> , <b>2014</b> , 14, 5148-54	11.5	179
81	Dielectric screening of excitons and trions in single-layer MoS2. <i>Nano Letters</i> , <b>2014</b> , 14, 5569-76	11.5	399
80	Electronics based on two-dimensional materials. <i>Nature Nanotechnology</i> , <b>2014</b> , 9, 768-79	28.7	1953
79	Asymmetric growth of bilayer graphene on copper enclosures using low-pressure chemical vapor deposition. <i>ACS Nano</i> , <b>2014</b> , 8, 6491-9	16.7	95
78	GaN-on-Si Vertical Schottky and p-n Diodes. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 618-620	4.4	119
77	Real-time, sensitive electrical detection of <i>Cryptosporidium parvum</i> oocysts based on chemical vapor deposition-grown graphene. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 063705	3.4	3
76	On the redox origin of surface trapping in AlGaN/GaN high electron mobility transistors. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 124506	2.5	20
75	Impact of chlorine functionalization on high-mobility chemical vapor deposition grown graphene. <i>ACS Nano</i> , <b>2013</b> , 7, 7262-70	16.7	98
74	Electrothermal Simulation and Thermal Performance Study of GaN Vertical and Lateral Power Transistors. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 2224-2230	2.9	99
73	Formation of low resistance ohmic contacts in GaN-based high electron mobility transistors with BCl3 surface plasma treatment. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 083508	3.4	27
72	Nanowire Channel InAlN/GaN HEMTs With High Linearity of $g_{\text{m}}$ and $f_{\text{T}}$ . <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 969-971	4.4	68
71	pH sensing properties of graphene solution-gated field-effect transistors. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 084505	2.5	76

70	Ultralow Leakage Current AlGaIn/GaN Schottky Diodes With 3-D Anode Structure. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 3365-3370	2.9	76
69	Charge Collection Mechanisms in AlGaIn/GaN MOS High Electron Mobility Transistors. <i>IEEE Transactions on Nuclear Science</i> , <b>2013</b> , 60, 4439-4445	1.7	21
68	The effect of copper pre-cleaning on graphene synthesis. <i>Nanotechnology</i> , <b>2013</b> , 24, 365602	3.4	102
67	Towards rapid nanoscale measurement of strain in III-nitride heterostructures. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 231904	3.4	7
66	An Etch-Stop Barrier Structure for GaN High-Electron-Mobility Transistors. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 369-371	4.4	41
65	Synthesis and transfer of single-layer transition metal disulfides on diverse surfaces. <i>Nano Letters</i> , <b>2013</b> , 13, 1852-7	11.5	524
64	Large-Area 2-D Electronics: Materials, Technology, and Devices. <i>Proceedings of the IEEE</i> , <b>2013</b> , 101, 1638-1652	16.5	39
63	Two-dimensional materials for ubiquitous electronics <b>2013</b> ,		1
62	Threshold voltage control by gate oxide thickness in fluorinated GaN metal-oxide-semiconductor high-electron-mobility transistors. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 033524	3.4	77
61	Impact of Moisture and Fluorocarbon Passivation on the Current Collapse of AlGaIn/GaN HEMTs. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 1378-1380	4.4	29
60	Tri-Gate Normally-Off GaN Power MISFET. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 360-362	4.4	180
59	Novel junction level cooling in pulsed GaN devices <b>2012</b> ,		1
58	Integrated circuits based on bilayer MoS <sub>2</sub> transistors. <i>Nano Letters</i> , <b>2012</b> , 12, 4674-80	11.5	1350
57	Wafer-Level Heterogeneous Integration of GaN HEMTs and Si (100) MOSFETs. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 200-202	4.4	31
56	Graphene Electronics for RF Applications. <i>IEEE Microwave Magazine</i> , <b>2012</b> , 13, 114-125	1.2	27
55	3000-V 4.3- $\Omega$ InAlN/GaN MOSHEMTs With AlGaIn Back Barrier. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 982-984	4.4	88
54	Optical investigation of degradation mechanisms in AlGaIn/GaN high electron mobility transistors: Generation of non-radiative recombination centers. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 112106	3.4	28
53	Integration of a phase change material for junction-level cooling in GaN devices <b>2012</b> ,		2

52	Synthesis of monolayer hexagonal boron nitride on Cu foil using chemical vapor deposition. <i>Nano Letters</i> , <b>2012</b> , 12, 161-6	11.5	902
51	Atomic layer deposition of Sc <sub>2</sub> O <sub>3</sub> for passivating AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistor devices. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 232109	3.4	36
50	Impact of the Al Mole Fraction in the Bulk- and Surface-State Induced Instability of AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs. <i>Materials Research Society Symposia Proceedings</i> , <b>2012</b> , 1432, 151		
49	Scaling of InAlN/Ga <sub>N</sub> power transistors <b>2012</b> ,		1
48	Correlating stress generation and sheet resistance in InAlN/Ga <sub>N</sub> nanoribbon high electron mobility transistors. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 113101	3.4	10
47	Extraction of Dynamic On-Resistance in Ga <sub>N</sub> Transistors: Under Soft- and Hard-Switching Conditions <b>2011</b> ,		62
46	300-GHz InAlN/Ga <sub>N</sub> HEMTs With InGa <sub>N</sub> Back Barrier. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 1525-1527	4.4	184
45	Influence of threading dislocation density on early degradation in AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistors. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 223501	3.4	60
44	BN/Graphene/BN Transistors for RF Applications. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 1209-1211	4.4	157
43	High Performance Mixed Signal and RF Circuits Enabled by the Direct Monolithic Heterogeneous Integration of Ga <sub>N</sub> HEMTs and Si CMOS on a Silicon Substrate <b>2011</b> ,		23
42	Compact Virtual-Source Current/Voltage Model for Top- and Back-Gated Graphene Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , <b>2011</b> , 58, 1523-1533	2.9	59
41	Impact of Graphene Interface Quality on Contact Resistance and RF Device Performance. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 1008-1010	4.4	111
40	Low temperature gate dielectric deposition for recessed AlGa <sub>N</sub> /Ga <sub>N</sub> MIS-HEMTs <b>2011</b> ,		4
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38	Role of oxygen in the OFF-state degradation of AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistors. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 223506	3.4	62
37	Study of transport properties in graphene monolayer flakes on SiO <sub>2</sub> substrates. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2010</b> , 28, C6D11-C6D14	1.3	3
36	Graphene-Based Ambipolar RF Mixers. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 906-908	4.4	202
35	. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 951-953	4.4	159

34	High-Performance Integrated Dual-Gate AlGa <sub>N</sub> /Ga <sub>N</sub> Enhancement-Mode Transistor. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 990-992	4.4	68
33	GaN-on-Si technology, a new approach for advanced devices in energy and communications <b>2010</b> ,		10
32	Breakdown mechanism in AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs on Si substrate <b>2010</b> ,		21
31	Applications of graphene devices in RF communications <b>2010</b> , 48, 122-128		124
30	Electric field distribution in AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistors investigated by electroluminescence. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 033502	3.4	10
29	GaN power electronics <b>2010</b> ,		9
28	Al <sub>2</sub> O <sub>3</sub> passivated InAlN/Ga <sub>N</sub> HEMTs on SiC substrate with record current density and transconductance. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2010</b> , 7, 2440-2444		47
27	On-wafer integration of nitrides and Si devices: Bringing the power of polarization to Si <b>2009</b> ,		3
26	Beyond the AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT: new concepts for high-speed transistors. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2009</b> , 206, 1145-1148	1.6	27
25	GaN and digital electronics: A way out of Moore's law?. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2009</b> , 6, 1361-1364		14
24	Enhancement-mode AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs with high linearity fabricated by hydrogen plasma treatment <b>2009</b> ,		6
23	Seamless on-wafer integration of Ga <sub>N</sub> HEMTs and Si(100) MOSFETs <b>2009</b> ,		2
22	AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs: RECENT DEVELOPMENTS AND FUTURE DIRECTIONS. <i>Selected Topics in Electronics and Systems</i> , <b>2009</b> , 155-164	0	
21	Origin of the Increasing Access Resistance in AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs <b>2008</b> ,		1
20	AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs: RECENT DEVELOPMENTS AND FUTURE DIRECTIONS. <i>International Journal of High Speed Electronics and Systems</i> , <b>2008</b> , 18, 913-922	0.5	1
19	Effect of image charges in the drain delay of AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistors. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 093502	3.4	13
18	N-face Ga <sub>N</sub> /AlGa <sub>N</sub> Transistors Through Substrate Removal <b>2008</b> ,		2
17	N-face high electron mobility transistors with a Ga <sub>N</sub> -spacer. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2007</b> , 204, 2049-2053	1.6	20

16	Low nonalloyed Ohmic contact resistance to nitride high electron mobility transistors using N-face growth. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 232103	3.4	53
15	Use of double-channel heterostructures to improve the access resistance and linearity in GaN-based HEMTs. <i>IEEE Transactions on Electron Devices</i> , <b>2006</b> , 53, 562-565	2.9	60
14	AlGaIn/GaN high electron mobility transistors with InGaIn back-barriers. <i>IEEE Electron Device Letters</i> , <b>2006</b> , 27, 13-15	4.4	271
13	High-performance E-mode AlGaIn/GaN HEMTs. <i>IEEE Electron Device Letters</i> , <b>2006</b> , 27, 428-430	4.4	127
12	Unpassivated high power deeply recessed GaN HEMTs with fluorine-plasma surface treatment. <i>IEEE Electron Device Letters</i> , <b>2006</b> , 27, 214-216	4.4	50
11	Optimization of AlGaIn/GaN HEMTs for high frequency operation. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2006</b> , 203, 1845-1850	1.6	25
10	High-power AlGaIn/GaN HEMTs for Ka-band applications. <i>IEEE Electron Device Letters</i> , <b>2005</b> , 26, 781-783	4.4	337
9	AlGaIn/GaN HEMTs with an InGaIn-based back-barrier <b>2005</b> ,		4
8	Influence of epitaxial structure in the noise figure of AlGaIn/GaN HEMTs. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2005</b> , 53, 762-769	4.1	16
7	Influence of the dynamic access resistance in the $g_{sub m}/$ and $f_{sub T}/$ linearity of AlGaIn/GaN HEMTs. <i>IEEE Transactions on Electron Devices</i> , <b>2005</b> , 52, 2117-2123	2.9	138
6	Demonstration of a GaN-spacer high electron mobility transistor with low alloy scattering. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2005</b> , 202, 837-840	1.6	7
5	Origin of etch delay time in Cl <sub>2</sub> dry etching of AlGaIn/GaN structures. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 4779-4781	3.4	66
4	AlGaIn/GaN High Electron Mobility Transistors 211-233		3
3	Selective dry etching of GaN over AlGaIn in BCl <sub>3</sub> /SF <sub>6</sub> mixtures		10
2	Effect of gate recessing on linearity characteristics of AlGaIn/GaN HEMTs		1
1	Ge-spacer technology in AlGaIn/GaN HEMTs for mm-wave applications		18