Tomas Palacios

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#	Paper	IF	Citations
195	Electronics based on two-dimensional materials. <i>Nature Nanotechnology</i> , 2014 , 9, 768-79	28.7	1953
194	Integrated circuits based on bilayer MoSiltransistors. <i>Nano Letters</i> , 2012 , 12, 4674-80	11.5	1350
193	Synthesis of monolayer hexagonal boron nitride on Cu foil using chemical vapor deposition. <i>Nano Letters</i> , 2012 , 12, 161-6	11.5	902
192	The 2018 GaN power electronics roadmap. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 163001	3	527
191	Synthesis and transfer of single-layer transition metal disulfides on diverse surfaces. <i>Nano Letters</i> , 2013 , 13, 1852-7	11.5	524
190	Graphene/MoS2 hybrid technology for large-scale two-dimensional electronics. <i>Nano Letters</i> , 2014 , 14, 3055-63	11.5	472
189	Dielectric screening of excitons and trions in single-layer MoS2. <i>Nano Letters</i> , 2014 , 14, 5569-76	11.5	399
188	High-power AlGaN/GaN HEMTs for Ka-band applications. <i>IEEE Electron Device Letters</i> , 2005 , 26, 781-783	4.4	337
187	Transport Properties of a MoS2/WSe2 Heterojunction Transistor and Its Potential for Application. <i>Nano Letters</i> , 2016 , 16, 1359-66	11.5	317
186	Synthesis of large-area multilayer hexagonal boron nitride for high material performance. <i>Nature Communications</i> , 2015 , 6, 8662	17.4	298
185	MoS Field-Effect Transistor with Sub-10 nm Channel Length. <i>Nano Letters</i> , 2016 , 16, 7798-7806	11.5	283
184	AlGaN/GaN high electron mobility transistors with InGaN back-barriers. <i>IEEE Electron Device Letters</i> , 2006 , 27, 13-15	4.4	271
183	Large-Area Synthesis of High-Quality Uniform Few-Layer MoTe2. <i>Journal of the American Chemical Society</i> , 2015 , 137, 11892-5	16.4	248
182	Graphene-Based Ambipolar RF Mixers. IEEE Electron Device Letters, 2010, 31, 906-908	4.4	202
181	Direct optical detection of Weyl fermion chirality in a topological semimetal. <i>Nature Physics</i> , 2017 , 13, 842-847	16.2	184
180	300-GHz InAlN/GaN HEMTs With InGaN Back Barrier. <i>IEEE Electron Device Letters</i> , 2011 , 32, 1525-1527	4.4	184
179	Tri-Gate Normally-Off GaN Power MISFET. <i>IEEE Electron Device Letters</i> , 2012 , 33, 360-362	4.4	180

(2016-2014)

178	Flexible graphene electrode-based organic photovoltaics with record-high efficiency. <i>Nano Letters</i> , 2014 , 14, 5148-54	11.5	179	
177	Two-dimensional MoS-enabled flexible rectenna for Wi-Fi-band wireless energy harvesting. <i>Nature</i> , 2019 , 566, 368-372	50.4	164	
176	High-Performance WSe2 Complementary Metal Oxide Semiconductor Technology and Integrated Circuits. <i>Nano Letters</i> , 2015 , 15, 4928-34	11.5	163	
175	High-Performance GaN Vertical Fin Power Transistors on Bulk GaN Substrates. <i>IEEE Electron Device Letters</i> , 2017 , 38, 509-512	4.4	162	
174	Parallel Stitching of 2D Materials. <i>Advanced Materials</i> , 2016 , 28, 2322-9	24	161	
173	. IEEE Electron Device Letters, 2010 , 31, 951-953	4.4	159	
172	BN/Graphene/BN Transistors for RF Applications. <i>IEEE Electron Device Letters</i> , 2011 , 32, 1209-1211	4.4	157	
171	Ultralow contact resistance between semimetal and monolayer semiconductors. <i>Nature</i> , 2021 , 593, 21	1-3:1.7	154	
170	Influence of the dynamic access resistance in the g/sub m/ and f/sub T/ linearity of AlGaN/GaN HEMTs. <i>IEEE Transactions on Electron Devices</i> , 2005 , 52, 2117-2123	2.9	138	
169	High-performance E-mode AlGaN/GaN HEMTs. IEEE Electron Device Letters, 2006, 27, 428-430	4.4	127	
168	Applications of graphene devices in RF communications 2010 , 48, 122-128		124	
167	Paraffin-enabled graphene transfer. <i>Nature Communications</i> , 2019 , 10, 867	17.4	122	
166	Origin and Control of OFF-State Leakage Current in GaN-on-Si Vertical Diodes. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 2155-2161	2.9	122	
165	GaN-on-Si Vertical Schottky and p-n Diodes. <i>IEEE Electron Device Letters</i> , 2014 , 35, 618-620	4.4	119	
164	High electrical conductivity and carrier mobility in oCVD PEDOT thin films by engineered crystallization and acid treatment. <i>Science Advances</i> , 2018 , 4, eaat5780	14.3	113	
163	Impact of Graphene Interface Quality on Contact Resistance and RF Device Performance. <i>IEEE Electron Device Letters</i> , 2011 , 32, 1008-1010	4.4	111	
162	Gallium nitride vertical power devices on foreign substrates: a review and outlook. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 273001	3	109	
161	Design, Modeling, and Fabrication of Chemical Vapor Deposition Grown MoS Circuits with E-Mode FETs for Large-Area Electronics. <i>Nano Letters</i> , 2016 , 16, 6349-6356	11.5	102	

160	The effect of copper pre-cleaning on graphene synthesis. <i>Nanotechnology</i> , 2013 , 24, 365602	3.4	102
159	Electrothermal Simulation and Thermal Performance Study of GaN Vertical and Lateral Power Transistors. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 2224-2230	2.9	99
158	Impact of chlorine functionalization on high-mobility chemical vapor deposition grown graphene. <i>ACS Nano</i> , 2013 , 7, 7262-70	16.7	98
157	Vertical GaN Junction Barrier Schottky Rectifiers by Selective Ion Implantation. <i>IEEE Electron Device Letters</i> , 2017 , 38, 1097-1100	4.4	96
156	Asymmetric growth of bilayer graphene on copper enclosures using low-pressure chemical vapor deposition. <i>ACS Nano</i> , 2014 , 8, 6491-9	16.7	95
155	Synthesis of High-Quality Large-Area Homogenous 1TPMoTe from Chemical Vapor Deposition. <i>Advanced Materials</i> , 2016 , 28, 9526-9531	24	88
154	3000-V 4.3-\$hbox{m}Omega cdot hbox{cm}^{2}\$ InAlN/GaN MOSHEMTs With AlGaN Back Barrier. <i>IEEE Electron Device Letters</i> , 2012 , 33, 982-984	4.4	88
153	AlGaN/GaN High-Electron-Mobility Transistors Fabricated Through a Au-Free Technology. <i>IEEE Electron Device Letters</i> , 2011 , 32, 623-625	4.4	88
152	Polarity in GaN and ZnO: Theory, measurement, growth, and devices. <i>Applied Physics Reviews</i> , 2016 , 3, 041303	17.3	85
151	Photoelectric Synaptic Plasticity Realized by 2D Perovskite. <i>Advanced Functional Materials</i> , 2019 , 29, 1902538	15.6	77
150	Threshold voltage control by gate oxide thickness in fluorinated GaN metal-oxide-semiconductor high-electron-mobility transistors. <i>Applied Physics Letters</i> , 2013 , 103, 033524	3.4	77
149	Two-dimensional materials for electronic applications. <i>MRS Bulletin</i> , 2014 , 39, 711-718	3.2	76
148	pH sensing properties of graphene solution-gated field-effect transistors. <i>Journal of Applied Physics</i> , 2013 , 114, 084505	2.5	76
147	Ultralow Leakage Current AlGaN/GaN Schottky Diodes With 3-D Anode Structure. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 3365-3370	2.9	76
146	Materials and processing issues in vertical GaN power electronics. <i>Materials Science in Semiconductor Processing</i> , 2018 , 78, 75-84	4.3	76
145	Nanowire Channel InAlN/GaN HEMTs With High Linearity of \$g_{rm m}\$ and \$f_{rm T}\$. <i>IEEE Electron Device Letters</i> , 2013 , 34, 969-971	4.4	68
144	High-Performance Integrated Dual-Gate AlGaN/GaN Enhancement-Mode Transistor. <i>IEEE Electron Device Letters</i> , 2010 , 31, 990-992	4.4	68
143	Chemiresistive Graphene Sensors for Ammonia Detection. <i>ACS Applied Materials & Company Compan</i>	9.5	67

(2006-2017)

142	Bright Room-Temperature Single-Photon Emission from Defects in Gallium Nitride. <i>Advanced Materials</i> , 2017 , 29, 1605092	24	66
141	Origin of etch delay time in Cl2 dry etching of AlGaN/GaN structures. <i>Applied Physics Letters</i> , 2003 , 83, 4779-4781	3.4	66
140	A Rational Strategy for Graphene Transfer on Substrates with Rough Features. <i>Advanced Materials</i> , 2016 , 28, 2382-92	24	63
139	Extraction of Dynamic On-Resistance in GaN Transistors: Under Soft- and Hard-Switching Conditions 2011 ,		62
138	Role of oxygen in the OFF-state degradation of AlGaN/GaN high electron mobility transistors. <i>Applied Physics Letters</i> , 2011 , 99, 223506	3.4	62
137	High-Performance 500 V Quasi- and Fully-Vertical GaN-on-Si pn Diodes. <i>IEEE Electron Device Letters</i> , 2017 , 38, 248-251	4.4	61
136	Influence of threading dislocation density on early degradation in AlGaN/GaN high electron mobility transistors. <i>Applied Physics Letters</i> , 2011 , 99, 223501	3.4	60
135	Use of double-channel heterostructures to improve the access resistance and linearity in GaN-based HEMTs. <i>IEEE Transactions on Electron Devices</i> , 2006 , 53, 562-565	2.9	60
134	Trench formation and corner rounding in vertical GaN power devices. <i>Applied Physics Letters</i> , 2017 , 110, 193506	3.4	59
133	Compact Virtual-Source CurrentWoltage Model for Top- and Back-Gated Graphene Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , 2011 , 58, 1523-1533	2.9	59
132	Graphene-Based Thermopile for Thermal Imaging Applications. <i>Nano Letters</i> , 2015 , 15, 7211-6	11.5	57
131	p-Channel GaN Transistor Based on p-GaN/AlGaN/GaN on Si. <i>IEEE Electron Device Letters</i> , 2019 , 40, 1036	- ₄ 1. Q 39	56
130	Hot Electron Transistor with van der Waals Base-Collector Heterojunction and High-Performance GaN Emitter. <i>Nano Letters</i> , 2017 , 17, 3089-3096	11.5	55
129	720-V/0.35-m \$Omega cdot\$ cm2 Fully Vertical GaN-on-Si Power Diodes by Selective Removal of Si Substrates and Buffer Layers. <i>IEEE Electron Device Letters</i> , 2018 , 39, 715-718	4.4	54
128	1200 V GaN vertical fin power field-effect transistors 2017 ,		53
127	Low nonalloyed Ohmic contact resistance to nitride high electron mobility transistors using N-face growth. <i>Applied Physics Letters</i> , 2007 , 91, 232103	3.4	53
126	Design space and origin of off-state leakage in GaN vertical power diodes 2015,		51
125	Unpassivated high power deeply recessed GaN HEMTs with fluorine-plasma surface treatment. <i>IEEE Electron Device Letters</i> , 2006 , 27, 214-216	4.4	50

124	Large-Area 1.2-kV GaN Vertical Power FinFETs With a Record Switching Figure of Merit. <i>IEEE Electron Device Letters</i> , 2018 , 1-1	4.4	50
123	Impact of Water-Assisted Electrochemical Reactions on the OFF-State Degradation of AlGaN/GaN HEMTs. <i>IEEE Transactions on Electron Devices</i> , 2014 , 61, 437-444	2.9	47
122	Al2O3 passivated InAlN/GaN HEMTs on SiC substrate with record current density and transconductance. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010 , 7, 2440-2444		47
121	Role of Molecular Sieves in the CVD Synthesis of Large-Area 2D MoTe2. <i>Advanced Functional Materials</i> , 2017 , 27, 1603491	15.6	46
120	Novel GaN trench MIS barrier Schottky rectifiers with implanted field rings 2016,		46
119	Flexible and high-performance electrochromic devices enabled by self-assembled 2D TiO/MXene heterostructures. <i>Nature Communications</i> , 2021 , 12, 1587	17.4	44
118	Regrowth-Free GaN-Based Complementary Logic on a Si Substrate. <i>IEEE Electron Device Letters</i> , 2020 , 41, 820-823	4.4	42
117	An Etch-Stop Barrier Structure for GaN High-Electron-Mobility Transistors. <i>IEEE Electron Device Letters</i> , 2013 , 34, 369-371	4.4	41
116	Ultrasmall Mode Volumes in Plasmonic Cavities of Nanoparticle-On-Mirror Structures. <i>Small</i> , 2016 , 12, 5190-5199	11	39
115	Large-Area 2-D Electronics: Materials, Technology, and Devices. <i>Proceedings of the IEEE</i> , 2013 , 101, 163	88 -116 52	2 39
114	Prospects for Wide Bandgap and Ultrawide Bandgap CMOS Devices. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 4010-4020	2.9	38
113	Atomic layer deposition of Sc2O3 for passivating AlGaN/GaN high electron mobility transistor devices. <i>Applied Physics Letters</i> , 2012 , 101, 232109	3.4	36
112	Giant intrinsic photoresponse in pristine graphene. <i>Nature Nanotechnology</i> , 2019 , 14, 145-150	28.7	36
111	GaN Nanowire n-MOSFET With 5 nm Channel Length for Applications in Digital Electronics. <i>IEEE Electron Device Letters</i> , 2017 , 38, 859-862	4.4	33
110	Reduction of on-resistance and current crowding in quasi-vertical GaN power diodes. <i>Applied Physics Letters</i> , 2017 , 111, 163506	3.4	32
109	Synergistic Roll-to-Roll Transfer and Doping of CVD-Graphene Using Parylene for Ambient-Stable and Ultra-Lightweight Photovoltaics. <i>Advanced Functional Materials</i> , 2020 , 30, 2001924	15.6	32
108	. IEEE Transactions on Electron Devices, 2020 , 67, 3960-3971	2.9	32
107	X-Ray Spectroscopic Investigation of Chlorinated Graphene: Surface Structure and Electronic Effects. <i>Advanced Functional Materials</i> , 2015 , 25, 4163-4169	15.6	32

(2020-2016)

106	Automatic graphene transfer system for improved material quality and efficiency. <i>Scientific Reports</i> , 2016 , 6, 21676	4.9	31	
105	Wafer-Level Heterogeneous Integration of GaN HEMTs and Si (100) MOSFETs. <i>IEEE Electron Device Letters</i> , 2012 , 33, 200-202	4.4	31	
104	Realization of 2D crystalline metal nitrides via selective atomic substitution. <i>Science Advances</i> , 2020 , 6, eaax8784	14.3	30	
103	AlN metalEemiconductor field-effect transistors using Si-ion implantation. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 04FR11	1.4	30	
102	Impact of Moisture and Fluorocarbon Passivation on the Current Collapse of AlGaN/GaN HEMTs. <i>IEEE Electron Device Letters</i> , 2012 , 33, 1378-1380	4.4	29	
101	Optical investigation of degradation mechanisms in AlGaN/GaN high electron mobility transistors: Generation of non-radiative recombination centers. <i>Applied Physics Letters</i> , 2012 , 100, 112106	3.4	28	
100	Asymmetric hot-carrier thermalization and broadband photoresponse in graphene-2D semiconductor lateral heterojunctions. <i>Science Advances</i> , 2019 , 5, eaav1493	14.3	27	
99	MOVPE growth of nitrogen- and aluminum-polar AlN on 4H-SiC. <i>Journal of Crystal Growth</i> , 2018 , 487, 50-56	1.6	27	
98	Formation of low resistance ohmic contacts in GaN-based high electron mobility transistors with BCl3 surface plasma treatment. <i>Applied Physics Letters</i> , 2013 , 103, 083508	3.4	27	
97	Graphene Electronics for RF Applications. <i>IEEE Microwave Magazine</i> , 2012 , 13, 114-125	1.2	27	
96	Beyond the AlGaN/GaN HEMT: new concepts for high-speed transistors. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009 , 206, 1145-1148	1.6	27	
95	High Temperature Terahertz Detectors Realized by a GaN High Electron Mobility Transistor. <i>Scientific Reports</i> , 2017 , 7, 46664	4.9	26	
94	A Current Voltage Model for Graphene Electrolyte-Gated Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , 2014 , 61, 3971-3977	2.9	26	
93	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> , 2014 , 11, 848-852		26	
92	Additive manufacturing of patterned 2D semiconductor through recyclable masked growth. Proceedings of the National Academy of Sciences of the United States of America, 2019 , 116, 3437-3442	11.5	25	
91	Optimization of AlGaN/GaN HEMTs for high frequency operation. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006 , 203, 1845-1850	1.6	25	
90	Leakage and breakdown mechanisms of GaN vertical power FinFETs. <i>Applied Physics Letters</i> , 2019 , 114, 163503	3.4	24	
89	Chemical sensor systems based on 2D and thin film materials. 2D Materials, 2020, 7, 022002	5.9	23	

88	High Performance Mixed Signal and RF Circuits Enabled by the Direct Monolithic Heterogeneous Integration of GaN HEMTs and Si CMOS on a Silicon Substrate 2011 ,		23
87	CVD Technology for 2-D Materials. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 4040-4052	2.9	23
86	Planar-Nanostrip-Channel InAlN/GaN HEMTs on Si With Improved \${g}_{{m}}\$ and \${f}_{textsf {T}}\$ Linearity. <i>IEEE Electron Device Letters</i> , 2017 , 38, 619-622	4.4	22
85	Repeated roll-to-roll transfer of two-dimensional materials by electrochemical delamination. <i>Nanoscale</i> , 2018 , 10, 5522-5531	7.7	22
84	Deep-Learning-Enabled Fast Optical Identification and Characterization of 2D Materials. <i>Advanced Materials</i> , 2020 , 32, e2000953	24	21
83	Charge Collection Mechanisms in AlGaN/GaN MOS High Electron Mobility Transistors. <i>IEEE Transactions on Nuclear Science</i> , 2013 , 60, 4439-4445	1.7	21
82	Breakdown mechanism in AlGaN/GaN HEMTs on Si substrate 2010 ,		21
81	Edge plasmons and cut-off behavior of graphene nano-ribbon waveguides. <i>Optics Communications</i> , 2016 , 370, 226-230	2	20
80	Planar Nanostrip-Channel Al2O3/InAlN/GaN MISHEMTs on Si With Improved Linearity. <i>IEEE Electron Device Letters</i> , 2018 , 39, 947-950	4.4	20
79	Room-temperature ballistic transport in III-nitride heterostructures. <i>Nano Letters</i> , 2015 , 15, 1070-5	11.5	20
78	On the redox origin of surface trapping in AlGaN/GaN high electron mobility transistors. <i>Journal of Applied Physics</i> , 2014 , 115, 124506	2.5	20
77	N-face high electron mobility transistors with a GaN-spacer. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007 , 204, 2049-2053	1.6	20
76	Demonstration of lateral field-effect transistors using Sn-doped E(AlGa)2O3 (010). <i>Japanese Journal of Applied Physics</i> , 2019 , 58, SBBD12	1.4	19
75	Nitrogen-Polar Polarization-Doped Field-Effect Transistor Based on Al0.8Ga0.2N/AlN on SiC With Drain Current Over 100 mA/mm. <i>IEEE Electron Device Letters</i> , 2019 , 40, 1245-1248	4.4	19
74	Beyond Thermal Management: Incorporating p-Diamond Back-Barriers and Cap Layers Into AlGaN/GaN HEMTs. <i>IEEE Transactions on Electron Devices</i> , 2016 , 63, 2340-2345	2.9	19
73	Ge-spacer technology in AlGaN/GaN HEMTs for mm-wave applications		18
72	ON-Resistance in Vertical Power FinFETs. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 3903-3909	2.9	17
71	. IEEE Transactions on Electron Devices, 2017 , 64, 3126-3131	2.9	17

(2012-2005)

70	Influence of epitaxial structure in the noise figure of AlGaN/GaN HEMTs. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2005 , 53, 762-769	4.1	16	
69	MOVPE growth of N-polar AlN on 4H-SiC: Effect of substrate miscut on layer quality. <i>Journal of Crystal Growth</i> , 2018 , 487, 12-16	1.6	15	
68	Large-scale sensor systems based on graphene electrolyte-gated field-effect transistors. <i>Analyst, The,</i> 2016 , 141, 2704-11	5	15	
67	Emerging GaN technologies for power, RF, digital, and quantum computing applications: Recent advances and prospects. <i>Journal of Applied Physics</i> , 2021 , 130, 160902	2.5	15	
66	GaN and digital electronics: A way out of Mooreß law?. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 1361-1364		14	
65	GaN FinFETs and trigate devices for power and RF applications: review and perspective. <i>Semiconductor Science and Technology</i> , 2021 , 36, 054001	1.8	14	
64	First Demonstration of a Self-Aligned GaN p-FET 2019 ,		14	
63	Frequency Response of Graphene Electrolyte-Gated Field-Effect Transistors. <i>Sensors</i> , 2018 , 18,	3.8	13	
62	Effect of image charges in the drain delay of AlGaNGaN high electron mobility transistors. <i>Applied Physics Letters</i> , 2008 , 92, 093502	3.4	13	
61	Vertical GaN power FET on bulk GaN substrate 2016 ,		12	
60	Superior Performance of 5-nm Gate Length GaN Nanowire nFET for Digital Logic Applications. <i>IEEE Electron Device Letters</i> , 2019 , 40, 874-877	4.4	11	
59	Switching Performance Analysis of Vertical GaN FinFETs: Impact of Interfin Designs. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , 2021 , 9, 2235-2246	5.6	11	
58	N-polar AlN buffer growth by metal®rganic vapor phase epitaxy for transistor applications. <i>Applied Physics Express</i> , 2018 , 11, 101002	2.4	11	
57	Opportunities and Challenges of Ambient Radio-Frequency Energy Harvesting. <i>Joule</i> , 2020 , 4, 1148-11.	52 7.8	10	
56	Direct Observation of Symmetry-Dependent Electron-Phonon Coupling in Black Phosphorus. Journal of the American Chemical Society, 2019 , 141, 18994-19001	16.4	10	
55	GaN-on-Si technology, a new approach for advanced devices in energy and communications 2010 ,		10	
54	Electric field distribution in AlGaN/GaN high electron mobility transistors investigated by electroluminescence. <i>Applied Physics Letters</i> , 2010 , 97, 033502	3.4	10	
53	Correlating stress generation and sheet resistance in InAlN/GaN nanoribbon high electron mobility transistors. <i>Applied Physics Letters</i> , 2012 , 101, 113101	3.4	10	

52	Selective dry etching of GaN over AlGaN in BCl/sub 3//SF/sub 6/ mixtures		10
51	Study of RF-circuit linearity performance of GaN HEMT technology using the MVSG compact device model 2016 ,		10
50	Barrier heights and Fermi level pinning in metal contacts on p-type GaN. <i>Applied Physics Letters</i> , 2020 , 116, 213506	3.4	9
49	GaN power electronics 2010,		9
48	Designing artificial two-dimensional landscapes via atomic-layer substitution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	9
47	Impact of AlO Passivation on the Photovoltaic Performance of Vertical WSe Schottky Junction Solar Cells. <i>ACS Applied Materials & Solar Cells</i> , 12, 57987-57995	9.5	8
46	Field-induced Acceptor Ionization in Enhancement-mode GaN p-MOSFETs 2020,		8
45	Vertical GaN Power Devices: Device Principles and Fabrication TechnologiesPart I. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 3200-3211	2.9	8
44	Enhancement of responsivity for a transistor terahertz detector by a Fabry-PEot resonance-cavity. <i>Applied Physics Letters</i> , 2017 , 110, 162101	3.4	7
43	Characterization of charge trapping mechanisms in GaN vertical Fin FETs under positive gate bias. <i>Microelectronics Reliability</i> , 2019 , 100-101, 113488	1.2	7
42	Towards rapid nanoscale measurement of strain in III-nitride heterostructures. <i>Applied Physics Letters</i> , 2013 , 103, 231904	3.4	7
41	Demonstration of a GaN-spacer high electron mobility transistor with low alloy scattering. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2005 , 202, 837-840	1.6	7
40	Healing of donor defect states in monolayer molybdenum disulfide using oxygen-incorporated chemical vapour deposition. <i>Nature Electronics</i> , 2022 , 5, 28-36	28.4	7
39	Enhancement-mode AlGaN/GaN HEMTs with high linearity fabricated by hydrogen plasma treatment 2009 ,		6
38	Tungsten-Gated GaN/AlGaN p-FET with Imax>120 mA/mm on GaN-on-Si. <i>IEEE Electron Device Letters</i> , 2022 , 1-1	4.4	6
37	2018,		6
36	MoS2 Phase-junction-based Schottky Diodes for RF Electronics 2018 ,		5
35	Self-Aligned E-mode GaN p-Channel FinFET with ION > 100 mA/mm and ION=IOFF > 107. <i>IEEE Electron Device Letters</i> , 2022 , 1-1	4.4	5

34	Analytical thermal model for HEMTs with complex epitaxial structures 2014,		4
33	Large signal linearity enhancement of AlGaN/GaN high electron mobility transistors by device-level Vt engineering for transconductance compensation 2017 ,		4
32	Low temperature gate dielectric deposition for recessed AlGaN/GaN MIS-HEMTs 2011,		4
31	AlGaN/GaN HEMTs with an InGaN-based back-barrier 2005,		4
30	Self-Align-Gated GaN Field Emitter Arrays Sharpened by a Digital Etching Process. <i>IEEE Electron Device Letters</i> , 2021 , 42, 422-425	4.4	4
29	GaN 2.0: Power FinFETs, Complementary Gate Drivers and Low-Cost Vertical Devices 2021 ,		4
28	Switching Performance Evaluation of 1200 V Vertical GaN Power FinFETs 2019,		4
27	Real-time, sensitive electrical detection of Cryptosporidium parvum oocysts based on chemical vapor deposition-grown graphene. <i>Applied Physics Letters</i> , 2014 , 104, 063705	3.4	3
26	Study of transport properties in graphene monolayer flakes on SiO2 substrates. <i>Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics</i> , 2010 , 28, C6D11-C6D14	1.3	3
25	On-wafer integration of nitrides and Si devices: Bringing the power of polarization to Si 2009,		3
24	AlGaN/GaN High Electron Mobility Transistors211-233		3
23	On the use of graphene to improve the performance of concentrator III-V multijunction solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2020 , 28, 60-70	6.8	3
22	Degradation Mechanisms of GaN-Based Vertical Devices: A Review. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020 , 217, 1900750	1.6	3
21	First Demonstration of GaN Vertical Power FinFETs on Engineered Substrate 2020,		3
20	Performance Estimation of GaN CMOS Technology 2021 ,		3
19	Heterogeneous Integration of 2D Materials and Devices on a Si Platform 2019 , 43-84		2
18	Nanostructured GaN transistors 2017 ,		2
17	Integration of a phase change material for junction-level cooling in GaN devices 2012,		2

16	Seamless on-wafer integration of GaN HEMTs and Si(100) MOSFETs 2009,		2
15	N-face GaN/AlGaN Transistors Through Substrate Removal 2008,		2
14	SynCells: A 60 160 fb Electronic Platform with Remote Actuation for Sensing Applications in Constrained Environments. <i>ACS Nano</i> , 2021 , 15, 8803-8812	16.7	2
13	Resonance-Enhanced Excitation of Interlayer Vibrations in Atomically Thin Black Phosphorus. <i>Nano Letters</i> , 2021 , 21, 4809-4815	11.5	2
12	GaN HEMTs with multi-functional p-diamond back-barriers 2016,		1
11	Impact of 2D-Graphene on SiN Passivated AlGaN/GaN MIS-HEMTs Under Mist Exposure. <i>IEEE Electron Device Letters</i> , 2017 , 38, 1441-1444	4.4	1
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7	Origin of the Increasing Access Resistance in AlGaN/GaN HEMTs 2008,		1
6	AlGaN/GaN HEMTs: RECENT DEVELOPMENTS AND FUTURE DIRECTIONS. <i>International Journal of High Speed Electronics and Systems</i> , 2008 , 18, 913-922	0.5	1
5	Effect of gate recessing on linearity characteristics of AlGaN/GaN HEMTs		1
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