Brian R Romanczyk

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.

41	593	13	22
papers	citations	h-index	g-index
45	**755**	**2.8**	**3.78**
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
41	Role of the AlGaN Cap Layer on the Trapping Behaviour of N-Polar GaN MISHEMTs **2021**,		1
40	6.2 W/Mm and Record 33.8% PAE at 94 GHz From N-Polar GaN Deep Recess MIS-HEMTs With ALD Ru Gates. *IEEE Microwave and Wireless Components Letters*, **2021**, 31, 748-751	2.6	13
39	Evaluation of linearity at 30 GHz for N-polar GaN deep recess transistors with 10.3 W/mm of output power and 47.4% PAE. *Applied Physics Letters*, **2021**, 119, 072105	3.4	3
38	Improved operation stability of in situ AlSiO dielectric grown on (000‍1) N-polar GaN by MOCVD. *Applied Physics Express*, **2020**, 13, 061010	2.4	5
37	Ultra-high silicon doped N-polar GaN contact layers grown by metal-organic chemical vapor deposition. *Semiconductor Science and Technology*, **2020**, 35, 095002	1.8	7
36	Bias-Dependent Electron Velocity Extracted From N-Polar GaN Deep Recess HEMTs. *IEEE Transactions on Electron Devices*, **2020**, 67, 1542-1546	2.9	6
35	High Linearity and High Gain Performance of N-Polar GaN MIS-HEMT at 30 GHz. *IEEE Electron Device Letters*, **2020**, 41, 681-684	4.4	17
34	Observation of ID-VD Kink in N-Polar GaN MIS-HEMTs at Cryogenic Temperatures. *IEEE Electron Device Letters*, **2020**, 41, 345-348	4.4	5
33	W-Band Power Performance of SiN-Passivated N-Polar GaN Deep Recess HEMTs. *IEEE Electron Device Letters*, **2020**, 41, 349-352	4.4	42
32	First experimental demonstration and analysis of electrical transport characteristics of a GaN-based HEMT with a relaxed InGaN channel. *Semiconductor Science and Technology*, **2020**, 35, 075007	1.8	8
31	High-electron-mobility transistors with metal-organic chemical vapor deposition-regrown contacts for high voltage applications. *Semiconductor Science and Technology*, **2020**, 35, 124004	1.8	2
30	A Novel Concept using Derivative Superposition at the Device-Level to Reduce Linearity Sensitivity to Bias in N-polar GaN MISHEMT **2020**,		2
29	. *IEEE Electron Device Letters*, **2020**, 41, 1468-1471	4.4	3
28	N-Polar GaN-on-Sapphire Deep Recess HEMTs With High W-Band Power Density. *IEEE Electron Device Letters*, **2020**, 41, 1633-1636	4.4	12
27	First demonstration of improvement in hole conductivity inc-plane III-Nitrides through application of uniaxial strain. *Japanese Journal of Applied Physics*, **2019**, 58, 030908	1.4	12
26	First demonstration of RF N-polar GaN MIS-HEMTs grown on bulk GaN using PAMBE. *Semiconductor Science and Technology*, **2019**, 34, 045009	1.8	12
25	Virtual-Source Modeling of N-polar GaN MISHEMTS **2019**,		1

24	Demonstration of 30 GHz OIP3/PDC > 10 dB by mm-wave N-polar Deep Recess MISHEMTs **2019**,		5
23	Enhanced mobility in vertically scaled N-polar high-electron-mobility transistors using GaN/InGaN composite channels. *Applied Physics Letters*, **2018**, 112, 073501	3.4	5
22	Analysis of MOCVD SiNx Passivated N-Polar GaN MIS-HEMTs on Sapphire With High $f_{max}cdot V_{DS,Q}$. *IEEE Electron Device Letters*, **2018**, 39, 409-412	4.4	13
21	Demonstration of Constant 8 W/mm Power Density at 10, 30, and 94 GHz in State-of-the-Art Millimeter-Wave N-Polar GaN MISHEMTs. *IEEE Transactions on Electron Devices*, **2018**, 65, 45-50	2.9	98
20	Investigation of Mg doping for low resistance N-polar p-GaN films grown at reduced temperatures by MOCVD. *Semiconductor Science and Technology*, **2018**, 33, 095014	1.8	9
19	N-Polar GaN HEMTs Exhibiting Record Breakdown Voltage Over 2000 V and Low Dynamic On-Resistance. *IEEE Electron Device Letters*, **2018**, 39, 1014-1017	4.4	50
18	N-Polar GaN Cap MISHEMT With Record Power Density Exceeding 6.5 W/mm at 94 GHz. *IEEE Electron Device Letters*, **2017**, 38, 359-362	4.4	56
17	Metal-organic chemical vapor deposition of high quality, high indium composition N-polar InGaN layers for tunnel devices. *Journal of Applied Physics*, **2017**, 121, 185707	2.5	16
16	High performance N-polar GaN HEMTs with OIP3/Pdc ~12dB at 10GHz **2017**,		2
15	Small-signal model extraction of mm-wave N-polar GaN MISHEMT exhibiting record performance: Analysis of gain and validation by 94 GHz loadpull **2016**,		15
14	mm-Wave N-polar GaN MISHEMT with a self-aligned recessed gate exhibiting record 4.2 W/mm at 94 GHz on Sapphire **2016**,		8
13	High frequency N-polar GaN planar MIS-HEMTs on sapphire with high breakdown and low dispersion **2016**,		10
12	High electron mobility recovery in AlGaN/GaN 2DEG channels regrown on etched surfaces. *Semiconductor Science and Technology*, **2016**, 31, 065008	1.8	10
11	N-Polar GaN MIS-HEMTs on Sapphire With High Combination of Power Gain Cutoff Frequency and Three-Terminal Breakdown Voltage. *IEEE Electron Device Letters*, **2016**, 37, 77-80	4.4	27
10	W-band passive load pull system for on-wafer characterization of high power density N-polar GaN devices based on output match and drive power requirements vs. gate width **2016**,		8
9	W-band N-polar GaN MISHEMTs with high power and record 27.8% efficiency at 94 GHz **2016**,		16
8	N-polar GaN Cap MISHEMT with record 6.7 W/mm at 94 GHz **2016**,		4
7	N-Polar Deep Recess MISHEMTs With Record 2.9 W/mm at 94 GHz. *IEEE Electron Device Letters*, **2016**, 1-1	4.4	18

6	Record 34.2% efficient mm-wave N-polar AlGaN/GaN MISHEMT at 87 GHz. *Electronics Letters*, **2016**, 52, 1813-1814	1.1	13
5	Performance Evaluation of In0.53Ga0.47As Esaki Tunnel Diodes on Silicon and InP Substrates. *IEEE Transactions on Electron Devices*, **2015**, 62, 2450-2456	2.9	11
4	Mapping Defect Density in MBE Grown ${rm In}_{0.53}{rm Ga}_{0.47}{rm As}$ Epitaxial Layers on Si Substrate Using Esaki Diode Valley Characteristics. *IEEE Transactions on Electron Devices*, **2014**, 61, 2049-2055	2.9	13
3	Benchmarking current density in staggered gap In0.53Ga0.47As/GaAs0.5Sb0.5 heterojunction Esaki tunnel diodes. *Applied Physics Letters*, **2013**, 102, 213504	3.4	18
2	**2012**,		15
1	Sub-micron Esaki Tunnel Diode fabrication and characterization **2009**,		2