Peter M Asbeck

List of Publications by Citations

130 papers	4,110 citations	37 h-index	61 g-index
138 ext. papers	4,908 ext. citations	3.5 avg, IF	5.56 L-index

#	Paper	IF	Citations
130	An Improved Power-Added Efficiency 19-dBm Hybrid Envelope Elimination and Restoration Power Amplifier for 802.11g WLAN Applications. *IEEE Transactions on Microwave Theory and Techniques*, **2006**, 54, 4086-4099	4.1	201
129	Border traps in Al2O3/In0.53Ga0.47As (100) gate stacks and their passivation by hydrogen anneals. *Applied Physics Letters*, **2010**, 96, 012906	3.4	163
128	Open-Loop Digital Predistorter for RF Power Amplifiers Using Dynamic Deviation Reduction-Based Volterra Series. *IEEE Transactions on Microwave Theory and Techniques*, **2008**, 56, 1524-1534	4.1	159
127	A Watt-Level Stacked-FET Linear Power Amplifier in Silicon-on-Insulator CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2010**, 58, 57-64	4.1	151
126	Analysis and Design of Stacked-FET Millimeter-Wave Power Amplifiers. *IEEE Transactions on Microwave Theory and Techniques*, **2013**, 61, 1543-1556	4.1	148
125	A Distributed Model for Border Traps in $hbox{Al}_{2} hbox{O}_{3}-hbox{InGaAs}$ MOS Devices. *IEEE Electron Device Letters*, **2011**, 32, 485-487	4.4	147
124	A Monolithic High-Efficiency 2.4-GHz 20-dBm SiGe BiCMOS Envelope-Tracking OFDM Power Amplifier. *IEEE Journal of Solid-State Circuits*, **2007**, 42, 1271-1281	5.5	144
123	A Distributed Bulk-Oxide Trap Model for $hbox{Al}_{2} hbox{O}_{3}$ InGaAs MOS Devices. *IEEE Transactions on Electron Devices*, **2012**, 59, 2100-2106	2.9	123
122	A 25 dBm Digitally Modulated CMOS Power Amplifier for WCDMA/EDGE/OFDM With Adaptive Digital Predistortion and Efficient Power Control. *IEEE Journal of Solid-State Circuits*, **2009**, 44, 1883-1896	5.5	120
121	Scaling of Nanowire Transistors. *IEEE Transactions on Electron Devices*, **2008**, 55, 2846-2858	2.9	112
120	Digital Predistortion for Envelope-Tracking Power Amplifiers Using Decomposed Piecewise Volterra Series. *IEEE Transactions on Microwave Theory and Techniques*, **2008**, 56, 2237-2247	4.1	98
119	Design of Tunneling Field-Effect Transistors Based on Staggered Heterojunctions for Ultralow-Power Applications. *IEEE Electron Device Letters*, **2010**, 31, 431-433	4.4	94
118	Enhanced Electromagnetic Interference Shielding Through the Use of Functionalized Carbon-Nanotube-Reactive Polymer Composites. *IEEE Nanotechnology Magazine*, **2010**, 9, 464-469	2.6	93
117	Enhanced dielectric constants and shielding effectiveness of, uniformly dispersed, functionalized carbon nanotube composites. *Applied Physics Letters*, **2009**, 94, 243111	3.4	84
116	A Combined Series-Parallel Hybrid Envelope Amplifier for Envelope Tracking Mobile Terminal RF Power Amplifier Applications. *IEEE Journal of Solid-State Circuits*, **2012**, 47, 1185-1198	5.5	81
115	Atomically abrupt and unpinned Al2O3/In0.53Ga0.47As interfaces: Experiment and simulation. *Journal of Applied Physics*, **2009**, 106, 124508	2.5	78
114	Superior electromagnetic interference shielding and dielectric properties of carbon nanotube composites through the use of high aspect ratio CNTs and three-roll milling. *Organic Electronics*, **2013**, 14, 1531-1537	3.5	70

113	ET Comes of Age: Envelope Tracking for Higher-Efficiency Power Amplifiers. *IEEE Microwave Magazine*, **2016**, 17, 16-25	1.2	68
112	Interface-State Modeling of $hbox{Al}_{2}hbox{O}_{3}$ InGaAs MOS From Depletion to Inversion. *IEEE Transactions on Electron Devices*, **2012**, 59, 2383-2389	2.9	64
111	Design of H-Bridge Class-D Power Amplifiers for Digital Pulse Modulation Transmitters. *IEEE Transactions on Microwave Theory and Techniques*, **2007**, 55, 2845-2855	4.1	63
110	A Wideband CMOS/GaAs HBT Envelope Tracking Power Amplifier for 4G LTE Mobile Terminal Applications. *IEEE Transactions on Microwave Theory and Techniques*, **2012**, 60, 1321-1330	4.1	58
109	High-Efficiency WCDMA Envelope Tracking Base-Station Amplifier Implemented With GaAs HVHBTs. *IEEE Journal of Solid-State Circuits*, **2009**, 44, 2629-2639	5.5	54
108	Novel Technique for Wideband Digital Predistortion of Power Amplifiers With an Under-Sampling ADC. *IEEE Transactions on Microwave Theory and Techniques*, **2014**, 62, 2604-2617	4.1	53
107	Active Millimeter-Wave Phase-Shift Doherty Power Amplifier in 45-nm SOI CMOS. *IEEE Journal of Solid-State Circuits*, **2013**, 48, 2338-2350	5.5	53
106	Digitally Assisted Dual-Switch High-Efficiency Envelope Amplifier for Envelope-Tracking Base-Station Power Amplifiers. *IEEE Transactions on Microwave Theory and Techniques*, **2011**, 59, 2943-2952	4.1	53
105	Power Amplifiers for mm-Wave 5G Applications: Technology Comparisons and CMOS-SOI Demonstration Circuits. *IEEE Transactions on Microwave Theory and Techniques*, **2019**, 67, 3099-3109	4.1	52
104	28 GHz Doherty Power Amplifier in CMOS SOI With 28% Back-Off PAE. *IEEE Microwave and Wireless Components Letters*, **2018**, 28, 446-448	2.6	52
103	A 2-Bit, 24 dBm, Millimeter-Wave SOI CMOS Power-DAC Cell for Watt-Level High-Efficiency, Fully Digital m-ary QAM Transmitters. *IEEE Journal of Solid-State Circuits*, **2013**, 48, 1126-1137	5.5	52
102	Multi-Drive Stacked-FET Power Amplifiers at 90 GHz in 45 nm SOI CMOS. *IEEE Journal of Solid-State Circuits*, **2014**, 49, 1148-1157	5.5	51
101	Piezoelectric polarization associated with dislocations in wurtzite GaN. *Applied Physics Letters*, **1999** , 74, 573-575	3.4	51
100	An analytical model for inductively coupled implantable biomedical devices with ferrite rods. *IEEE Transactions on Biomedical Circuits and Systems*, **2009**, 3, 43-52	5.1	49
99	Multigate-Cell Stacked FET Design for Millimeter-Wave CMOS Power Amplifiers. *IEEE Journal of Solid-State Circuits*, **2016**, 51, 2027-2039	5.5	44
98	CMOS Outphasing Class-D Amplifier With Chireix Combiner. *IEEE Microwave and Wireless Components Letters*, **2007**, 17, 619-621	2.6	43
97	Modeling and Design of RF Amplifiers for Envelope Tracking WCDMA Base-Station Applications. *IEEE Transactions on Microwave Theory and Techniques*, **2009**, 57, 2148-2159	4.1	39
96	A Q-Band Amplifier Implemented with Stacked 45-nm CMOS FETs **2011**,		39

95	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2012**, 59, 2111-2124	3.9	38
94	A numerical Schrödinger-Poisson solver for radially symmetric nanowire core-shell structures. *Solid-State Electronics*, **2006**, 50, 1732-1739	1.7	37
93	Linearity Improvement of HBT-Based Doherty Power Amplifiers Based on a Simple Analytical Model. *IEEE Transactions on Microwave Theory and Techniques*, **2006**, 54, 4479-4488	4.1	36
92	Lateral Graphene Heterostructure Field-Effect Transistor. *IEEE Electron Device Letters*, **2013**, 34, 1190-1192	4.4	35
91	Voltage Mode Doherty Power Amplifier. *IEEE Journal of Solid-State Circuits*, **2017**, 52, 1295-1304	5.5	34
90	A Class-G Voltage-Mode Doherty Power Amplifier. *IEEE Journal of Solid-State Circuits*, **2017**, 52, 3348-3360	5.5	34
89	Closed-Loop Digital Predistortion System With Fast Real-Time Adaptation Applied to a Handset WCDMA PA Module. *IEEE Transactions on Microwave Theory and Techniques*, **2012**, 60, 604-618	4.1	34
88	A 20 dBm Linear RF Power Amplifier Using Stacked Silicon-on-Sapphire MOSFETs. *IEEE Microwave and Wireless Components Letters*, **2006**, 16, 684-686	2.6	33
87	A reusable microfluidic plate with alternate-choice architecture for assessing growth preference in tissue culture. *Journal of Neuroscience Methods*, **2005**, 144, 79-89	3	33
86	Q -Band and W -Band Power Amplifiers in 45-nm CMOS SOI. *IEEE Transactions on Microwave Theory and Techniques*, **2012**, 60, 1870-1877	4.1	31
85	Photoreflectance characterization of an InP/InGaAs heterojunction bipolar transistor structure. *Applied Physics Letters*, **1992**, 61, 2066-2068	3.4	29
84	. *IEEE Transactions on Microwave Theory and Techniques*, **2018**, 66, 1339-1348	4.1	27
83	Digitally-Controlled Polar Transmitter Using a Watt-Class Current-Mode Class-D CMOS Power Amplifier and Guanella Reverse Balun for Handset Applications. *IEEE Journal of Solid-State Circuits*, **2012**, 47, 1104-1112	5.5	27
82	A PMOS mm-wave power amplifier at 77 GHz with 90 mW output power and 24% efficiency **2016**,		25
81	Single-Ended and Differential Radial Power Combiners Implemented With a Compact Broadband Probe. *IEEE Transactions on Microwave Theory and Techniques*, **2010**, 58, 1565-1572	4.1	24
80	Transmission of Signals With Complex Constellations Using Millimeter-Wave Spatially Power-Combined CMOS Power Amplifiers and Digital Predistortion. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 2364-2374	4.1	21
79	All-Digital Cancellation Technique to Mitigate Receiver Desensitization in Uplink Carrier Aggregation in Cellular Handsets. *IEEE Transactions on Microwave Theory and Techniques*, **2013**, 61, 4754-4765	4.1	20
78	Efficiency Enhancement of mm-Wave Power Amplifiers Using Envelope Tracking. *IEEE Microwave and Wireless Components Letters*, **2011**, 21, 157-159	2.6	20

77	Design of a 4-W Envelope Tracking Power Amplifier With More Than One Octave Carrier Bandwidth. *IEEE Journal of Solid-State Circuits*, **2012**, 47, 2298-2308	5.5	19
76	Design of a Wideband High-Voltage High-Efficiency BiCMOS Envelope Amplifier for Micro-Base-Station RF Power Amplifiers. *IEEE Transactions on Microwave Theory and Techniques*, **2012**, 60, 1850-1861	4.1	18
75	Analysis of Reverse Leakage Current and Breakdown Voltage in GaN and InGaN/GaN Schottky Barriers. *IEEE Transactions on Electron Devices*, **2011**, 58, 1986-1994	2.9	18
74	**2012**,		18
73	Concurrent Dual-Band Digital Predistortion With a Single Feedback Loop. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 1556-1568	4.1	17
72	Millimeter-Wave Power Amplifier Integrated Circuits for High Dynamic Range Signals. *IEEE Journal of Microwaves*, **2021**, 1, 299-316		17
71	Neural recording and stimulation using wireless networks of microimplants. *Nature Electronics*, **2021**, 4, 604-614	28.4	17
70	Characterization of Intermodulation and Memory Effects Using Offset Multisine Excitation. *IEEE Transactions on Microwave Theory and Techniques*, **2014**, 62, 645-657	4.1	16
69	Spatially power-combined W-band power amplifier using stacked CMOS **2014**,		16
68	InGaN/GaN Schottky Diodes With Enhanced Voltage Handling Capability for Varactor Applications. *IEEE Electron Device Letters*, **2010**, 31, 1119-1121	4.4	16
67	High-Order Modulation Transmission Through Frequency Quadrupler Using Digital Predistortion. *IEEE Transactions on Microwave Theory and Techniques*, **2016**, 64, 1896-1910	4.1	16
66	Comparison of pMOS and nMOS 28 GHz high efficiency linear power amplifiers in 45 nm CMOS SOI **2018**,		15
65	Self-consistent 1-D Schrödinger–Poisson solver for III–V heterostructures accounting for conduction band non-parabolicity. *Solid-State Electronics*, **2010**, 54, 1257-1262	1.7	15
64	Q-Band Spatially Combined Power Amplifier Arrays in 45-nm CMOS SOI. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 1937-1950	4.1	14
63	Physical modeling of degenerately doped compound semiconductors for high-performance HBT design. *Solid-State Electronics*, **2006**, 50, 1440-1449	1.7	14
62	A 45-GHz SiGe HBT amplifier at greater than 25 % efficiency and 30 mW output power **2011**,		13
61	. *IEEE Journal of Solid-State Circuits*, **2020**, 1-1	5.5	12
60	Projected Performance of Heterostructure Tunneling FETs in Low Power Microwave and mm-Wave Applications. *IEEE Journal of the Electron Devices Society*, **2015**, 3, 122-134	2.3	12

59	Growth of InGaN HBTs by MOCVD. *Journal of Electronic Materials*, **2006**, 35, 695-700	1.9	12
58	A 11% PAE, 15.8-dBm two-stage 90-GHz stacked-FET power amplifier in 45-nm SOI CMOS **2013**,		11
57	Minority carrier transport properties of GaInNAs heterojunction bipolar transistors with 2% nitrogen. *Journal of Applied Physics*, **2004**, 95, 327-333	2.5	11
56	COMPUTATIONALLY EFFICIENT MODEL FOR UWB SIGNAL ATTENUATION DUE TO PROPAGATION IN TISSUE FOR BIOMEDICAL IMPLANTS. *Progress in Electromagnetics Research B*, **2012**, 38, 1-22	0.7	10
55	RF Power Amplifier Efficiency Enhancement by Envelope Injection and Termination for Mobile Terminal Applications. *IEEE Transactions on Microwave Theory and Techniques*, **2013**, 61, 878-889	4.1	10
54	All-digital cancellation technique to mitigate self-jamming in uplink carrier aggregation in cellular handsets **2013**,		10
53	H-Bridge Class-D Power Amplifiers for Digital Pulse Modulation Transmitters. *IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium*, **2007**,		10
52	15 GHz 25 dBm multigate-cell stacked CMOS power amplifier with 32 % PAE and □30 dB gain for 5G applications **2016**,		10
51	A 45-GHz Si/SiGe 256-QAM transmitter with digital predistortion **2015**,		9
50	A 34% PAE, 18.6dBm 42□45GHz stacked power amplifier in 45nm SOI CMOS **2012**,		9
49	High Power Digitally-Controlled SOI CMOS Attenuator With Wide Attenuation Range. *IEEE Microwave and Wireless Components Letters*, **2011**, 21, 433-435	2.6	9
48	Development of HBT structure to minimize parasitic elements. *Solid-State Electronics*, **1995**, 38, 1691-1695	1.7	9
47	Synthesis Technique for Low-Loss mm-Wave T/R Combiners for TDD Front-Ends. *IEEE Transactions on Microwave Theory and Techniques*, **2019**, 67, 1030-1038	4.1	8
46	A CMOS 45 GHz power amplifier with output power > 600 mW using spatial power combining **2014**,		7
45	Long Time-Constant Trap Effects in Nitride Heterostructure Field Effect Transistors. *Materials Research Society Symposia Proceedings*, **2000**, 622, 6281		7
44	A 45 % PAE pMOS Power Amplifier for 28GHz Applications in 45nm SOI **2018**,		7
43	Compact Modeling of Distributed Effects in 2-D Vertical Tunnel FETs and Their Impact on DC and RF Performances. *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits*, **2017**, 3, 18-26	2.4	6
42	Modeling of Deterministic Output Emissions of Power Amplifiers Into Adjacent Receive Bands. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 1250-1262	4.1	6

41	A Watt-Class, High-Efficiency, Digitally-Modulated Polar Power Amplifier in SOI CMOS **2015**,		6
40	Digital etching of III-N materials using a two-step Ar/KOH technique. *Journal of Electronic Materials*, **2006**, 35, 771-776	1.9	6
39	Linearity Improvement of HBT-based Doherty Power Amplifiers Based on a Simple Analytical Model **2006**,		6
38	Series power combining: Enabling techniques for Si/SiGe millimeter-wave power amplifiers **2016**,		6
37	. *IEEE Journal of Solid-State Circuits*, **2017**, 52, 1185-1195	5.5	5
36	Intrinsically Linear Transistor for Millimeter-Wave Low Noise Amplifiers. *Nano Letters*, **2020**, 20, 2812-2820	12.5	5
35	Characterization of interface defects in ALD Al2O3/p-GaSb MOS capacitors using admittance measurements in range from kHz to GHz. *Solid-State Electronics*, **2016**, 118, 18-25	1.7	5
34	Analysis of heat dissipation of epitaxial graphene devices on SiC. *Solid-State Electronics*, **2014**, 101, 44-49	1.7	5
33	A W-band stacked FET power amplifier with 17 dBm Psat in 45-nm SOI MOS **2013**,		5
32	Reduced temperature S-parameter measurements of 400+GHz sub-micron InP DHBTs. *Solid-State Electronics*, **2007**, 51, 870-881	1.7	5
31	Improved Envelope Injection and Termination (EIT) RF Power Amplifier With Envelope Equalization for Mobile Terminal Applications. *IEEE Transactions on Microwave Theory and Techniques*, **2014**, 62, 341-351	4.1	4
30	A 42 to 47-GHz, 8-bit I/Q digital-to-RF converter with 21-dBm Psat and 16% PAE in 45-nm SOI CMOS **2013**,		4
29	An Envelope-Tracking CMOS-SOS Power Amplifier with 50% Overall PAE and 29.3 dBm Output Power for LTE Applications **2012**,		4
28	A 9 mW, Q-Band Direct-Conversion I/Q Modulator in SiGe BiCMOS Process. *IEEE Microwave and Wireless Components Letters*, **2012**, 22, 327-329	2.6	4
27	Effects of surface micromesas on reverse leakage current in InGaN/GaN Schottky barriers. *Journal of Applied Physics*, **2012**, 112, 044505	2.5	4
26	Wideband high efficiency envelope tracking integrated circuit for micro-base station power amplifiers **2011**,		4
25	Frequency quadrupling transmitter architecture with digital predistortion for high-order modulation signal transmission **2015**,		3
24	Critical design considerations for GaN-based microwave power varactors **2012**,		3

23	Digital predistortion of envelope-tracking power amplifiers under average power back-off and long-term average power efficiency for base-station applications. *International Journal of Microwave and Wireless Technologies*, **2013**, 5, 171-177	0.8	3
22	A W-band stacked FET power amplifier with 17 dBm Psat in 45-nm SOI CMOS **2013**,		3
21	0.7–1.8 GHz multiband digital polar transmitter using watt-class current-mode class-D CMOS power amplifier and digital envelope modulation technique for reduced spurious emissions. *International Journal of Microwave and Wireless Technologies*, **2013**, 5, 271-284	0.8	3
20	GaN Envelope Tracking Power Amplifier with More Than One Octave Carrier Bandwidth **2011**,		3
19	Power Amplifier Approaches for High Efficiency and Linearity189-227		3
18	High-power, high-efficiency digital polar doherty power amplifier for cellular applications in SOI CMOS **2016**,		3
17	Numerical study of inhomogeneity effects on Hall measurements of graphene films. *Solid-State Electronics*, **2015**, 106, 34-43	1.7	2
16	Linear operation of high-power millimeter-wave stacked-FET PAs in CMOS SOI **2012**,		2
15	Efficiency ehancement of W-CDMA base-station envelope tracking power amplifiers via load modulation. *Microwave and Optical Technology Letters*, **2007**, 49, 1954-1957	1.2	2
14	. *IEEE Transactions on Electron Devices*, **2007**, 54, 398-409	2.9	2
13	InP HBT millimeter-wave power amplifier implemented using planar radial power combiner **2008**,		2
12	Analysis of Temperature Dependent Effects on IV Characteristics of Heterostructure Tunnel Field Effect Transistors. *IEEE Journal of the Electron Devices Society*, **2016**, 4, 416-423	2.3	2
11	Techniques for Power Dynamic Range and Back-Off Efficiency Improvement in CMOS Digitally Controlled Polar Transmitters. *IEEE Transactions on Microwave Theory and Techniques*, **2016**, 1-12	4.1	1
10	Analysis of Resistance Asymmetry Due to p-n Junctions in Graphene FETs. *Materials Research Society Symposia Proceedings*, **2010**, 1259, 1		1
9	Charge transfer region at the edge of metal contacts on graphene and its impact on contact resistance measurement **2011**,		1
8	ANALYSIS OF HIGH DC CURRENT GAIN STRUCTURES FOR GaN/InGaN/GaN HBTs. *International Journal of High Speed Electronics and Systems*, **2004**, 14, 825-830	0.5	1
7	Adaptive Cancellation of Digital Power Amplifier Receive Band Noise for FDD Transceivers. *IEEE Microwave and Wireless Components Letters*, **2019**, 29, 59-61	2.6	1
6	HIGH SPEED CROSSPOINT SWITCHES. *Selected Topics in Electornics and Systems*, **1999**, 193-236	0	0

5	Interconnect effects on thermal resistance of CMOS-SOI transistors in microwave power integrated circuits. *Solid-State Electronics*, **2021**, 186, 108149	1.7	0
4	PERFORMANCE COMPARISON OF SCALED III-V AND Si BALLISTIC NANOWIRE MOSFETs. *International Journal of High Speed Electronics and Systems*, **2009**, 19, 15-22	0.5	
3	Advanced GaAs-Based HBT Designs for Wireless Communications Systems39-77		
2	Photoemission studies on heterostructure bipolar transistors. *Solid-State Electronics*, **1999**, 43, 1555-1560	1.7	
1	PERFORMANCE COMPARISON OF SCALED III-V AND Si BALLISTIC NANOWIRE MOSFETs. *Selected Topics in Electornics and Systems*, **2009**, 15-22	0	