

Peter M Asbeck

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.

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	Millimeter-Wave Power Amplifier Integrated Circuits for High Dynamic Range Signals. <i>IEEE Journal of Microwaves</i> , 2021 , 1, 299-316		17
129	Neural recording and stimulation using wireless networks of microimplants. <i>Nature Electronics</i> , 2021 , 4, 604-614	28.4	17
128	Interconnect effects on thermal resistance of CMOS-SOI transistors in microwave power integrated circuits. <i>Solid-State Electronics</i> , 2021 , 186, 108149	1.7	0
127	Intrinsically Linear Transistor for Millimeter-Wave Low Noise Amplifiers. <i>Nano Letters</i> , 2020 , 20, 2812-2820	20.5	5
126	. <i>IEEE Journal of Solid-State Circuits</i> , 2020 , 1-1	5.5	12
125	Power Amplifiers for mm-Wave 5G Applications: Technology Comparisons and CMOS-SOI Demonstration Circuits. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2019 , 67, 3099-3109	4.1	52
124	Synthesis Technique for Low-Loss mm-Wave T/R Combiners for TDD Front-Ends. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2019 , 67, 1030-1038	4.1	8
123	Adaptive Cancellation of Digital Power Amplifier Receive Band Noise for FDD Transceivers. <i>IEEE Microwave and Wireless Components Letters</i> , 2019 , 29, 59-61	2.6	1
122	. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2018 , 66, 1339-1348	4.1	27
121	28 GHz Doherty Power Amplifier in CMOS SOI With 28% Back-Off PAE. <i>IEEE Microwave and Wireless Components Letters</i> , 2018 , 28, 446-448	2.6	52
120	Comparison of pMOS and nMOS 28 GHz high efficiency linear power amplifiers in 45 nm CMOS SOI 2018 ,		15
119	A 45 % PAE pMOS Power Amplifier for 28GHz Applications in 45nm SOI 2018 ,		7
118	Voltage Mode Doherty Power Amplifier. <i>IEEE Journal of Solid-State Circuits</i> , 2017 , 52, 1295-1304	5.5	34
117	Compact Modeling of Distributed Effects in 2-D Vertical Tunnel FETs and Their Impact on DC and RF Performances. <i>IEEE Journal on Exploratory Solid-State Computational Devices and Circuits</i> , 2017 , 3, 18-26	2.4	6
116	. <i>IEEE Journal of Solid-State Circuits</i> , 2017 , 52, 1185-1195	5.5	5
115	A Class-G Voltage-Mode Doherty Power Amplifier. <i>IEEE Journal of Solid-State Circuits</i> , 2017 , 52, 3348-3360	5.5	34
114	Multigate-Cell Stacked FET Design for Millimeter-Wave CMOS Power Amplifiers. <i>IEEE Journal of Solid-State Circuits</i> , 2016 , 51, 2027-2039	5.5	44

113	Techniques for Power Dynamic Range and Back-Off Efficiency Improvement in CMOS Digitally Controlled Polar Transmitters. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2016 , 1-12	4.1	1
112	ET Comes of Age: Envelope Tracking for Higher-Efficiency Power Amplifiers. <i>IEEE Microwave Magazine</i> , 2016 , 17, 16-25	1.2	68
111	Characterization of interface defects in ALD Al ₂ O ₃ /p-GaSb MOS capacitors using admittance measurements in range from kHz to GHz. <i>Solid-State Electronics</i> , 2016 , 118, 18-25	1.7	5
110	15 GHz 25 dBm multigate-cell stacked CMOS power amplifier with 32 % PAE and 30 dB gain for 5G applications 2016 ,		10
109	Analysis of Temperature Dependent Effects on IV Characteristics of Heterostructure Tunnel Field Effect Transistors. <i>IEEE Journal of the Electron Devices Society</i> , 2016 , 4, 416-423	2.3	2
108	High-Order Modulation Transmission Through Frequency Quadrupler Using Digital Predistortion. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2016 , 64, 1896-1910	4.1	16
107	Series power combining: Enabling techniques for Si/SiGe millimeter-wave power amplifiers 2016 ,		6
106	High-power, high-efficiency digital polar doherty power amplifier for cellular applications in SOI CMOS 2016 ,		3
105	A PMOS mm-wave power amplifier at 77 GHz with 90 mW output power and 24% efficiency 2016 ,		25
104	A 45-GHz Si/SiGe 256-QAM transmitter with digital predistortion 2015 ,		9
103	Frequency quadrupling transmitter architecture with digital predistortion for high-order modulation signal transmission 2015 ,		3
102	Transmission of Signals With Complex Constellations Using Millimeter-Wave Spatially Power-Combined CMOS Power Amplifiers and Digital Predistortion. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015 , 63, 2364-2374	4.1	21
101	Modeling of Deterministic Output Emissions of Power Amplifiers Into Adjacent Receive Bands. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015 , 63, 1250-1262	4.1	6
100	Concurrent Dual-Band Digital Predistortion With a Single Feedback Loop. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015 , 63, 1556-1568	4.1	17
99	\$Q\$-Band Spatially Combined Power Amplifier Arrays in 45-nm CMOS SOI. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015 , 63, 1937-1950	4.1	14
98	Projected Performance of Heterostructure Tunneling FETs in Low Power Microwave and mm-Wave Applications. <i>IEEE Journal of the Electron Devices Society</i> , 2015 , 3, 122-134	2.3	12
97	A Watt-Class, High-Efficiency, Digitally-Modulated Polar Power Amplifier in SOI CMOS 2015 ,		6
96	Numerical study of inhomogeneity effects on Hall measurements of graphene films. <i>Solid-State Electronics</i> , 2015 , 106, 34-43	1.7	2

95	Improved Envelope Injection and Termination (EIT) RF Power Amplifier With Envelope Equalization for Mobile Terminal Applications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2014 , 62, 341-351	4.1	4
94	Characterization of Intermodulation and Memory Effects Using Offset Multisine Excitation. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2014 , 62, 645-657	4.1	16
93	Novel Technique for Wideband Digital Predistortion of Power Amplifiers With an Under-Sampling ADC. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2014 , 62, 2604-2617	4.1	53
92	Multi-Drive Stacked-FET Power Amplifiers at 90 GHz in 45 nm SOI CMOS. <i>IEEE Journal of Solid-State Circuits</i> , 2014 , 49, 1148-1157	5.5	51
91	A CMOS 45 GHz power amplifier with output power > 600 mW using spatial power combining 2014 ,		7
90	Spatially power-combined W-band power amplifier using stacked CMOS 2014 ,		16
89	Analysis of heat dissipation of epitaxial graphene devices on SiC. <i>Solid-State Electronics</i> , 2014 , 101, 44-49	1.7	5
88	Active Millimeter-Wave Phase-Shift Doherty Power Amplifier in 45-nm SOI CMOS. <i>IEEE Journal of Solid-State Circuits</i> , 2013 , 48, 2338-2350	5.5	53
87	Analysis and Design of Stacked-FET Millimeter-Wave Power Amplifiers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2013 , 61, 1543-1556	4.1	148
86	Lateral Graphene Heterostructure Field-Effect Transistor. <i>IEEE Electron Device Letters</i> , 2013 , 34, 1190-1192	4.1	35
85	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
84	All-Digital Cancellation Technique to Mitigate Receiver Desensitization in Uplink Carrier Aggregation in Cellular Handsets. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2013 , 61, 4754-4765	4.1	20
83	A 11% PAE, 15.8-dBm two-stage 90-GHz stacked-FET power amplifier in 45-nm SOI CMOS 2013 ,		11
82	RF Power Amplifier Efficiency Enhancement by Envelope Injection and Termination for Mobile Terminal Applications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2013 , 61, 878-889	4.1	10
81	Superior electromagnetic interference shielding and dielectric properties of carbon nanotube composites through the use of high aspect ratio CNTs and three-roll milling. <i>Organic Electronics</i> , 2013 , 14, 1531-1537	3.5	70
80	A 2-Bit, 24 dBm, Millimeter-Wave SOI CMOS Power-DAC Cell for Watt-Level High-Efficiency, Fully Digital m-ary QAM Transmitters. <i>IEEE Journal of Solid-State Circuits</i> , 2013 , 48, 1126-1137	5.5	52
79	Digital predistortion of envelope-tracking power amplifiers under average power back-off and long-term average power efficiency for base-station applications. <i>International Journal of Microwave and Wireless Technologies</i> , 2013 , 5, 171-177	0.8	3
78	All-digital cancellation technique to mitigate self-jamming in uplink carrier aggregation in cellular handsets 2013 ,		10

77	A W-band stacked FET power amplifier with 17 dBm Psat in 45-nm SOI CMOS 2013 ,		3
76	A W-band stacked FET power amplifier with 17 dBm Psat in 45-nm SOI MOS 2013 ,		5
75	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. <i>International Journal of Microwave and Wireless Technologies</i> , 2013 , 5, 271-284	0.8	3
74	A Combined Series-Parallel Hybrid Envelope Amplifier for Envelope Tracking Mobile Terminal RF Power Amplifier Applications. <i>IEEE Journal of Solid-State Circuits</i> , 2012 , 47, 1185-1198	5.5	81
73	Digitally-Controlled Polar Transmitter Using a Watt-Class Current-Mode Class-D CMOS Power Amplifier and Guanella Reverse Balun for Handset Applications. <i>IEEE Journal of Solid-State Circuits</i> , 2012 , 47, 1104-1112	5.5	27
72	A Distributed Bulk-Oxide Trap Model for $\text{Al}_{0.2}\text{Ga}_{0.8}\text{As}$ InGaAs MOS Devices. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 2100-2106	2.9	123
71	A Wideband CMOS/GaAs HBT Envelope Tracking Power Amplifier for 4G LTE Mobile Terminal Applications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2012 , 60, 1321-1330	4.1	58
70	An Envelope-Tracking CMOS-SOS Power Amplifier with 50% Overall PAE and 29.3 dBm Output Power for LTE Applications 2012 ,		4
69	Closed-Loop Digital Predistortion System With Fast Real-Time Adaptation Applied to a Handset WCDMA PA Module. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2012 , 60, 604-618	4.1	34
68	A 34% PAE, 18.6dBm 42-45GHz stacked power amplifier in 45nm SOI CMOS 2012 ,		9
67	A 9 mW, Q-Band Direct-Conversion I/Q Modulator in SiGe BiCMOS Process. <i>IEEE Microwave and Wireless Components Letters</i> , 2012 , 22, 327-329	2.6	4
66	Linear operation of high-power millimeter-wave stacked-FET PAs in CMOS SOI 2012 ,		2
65	Critical design considerations for GaN-based microwave power varactors 2012 ,		3
64	Q-Band and W-Band Power Amplifiers in 45-nm CMOS SOI. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2012 , 60, 1870-1877	4.1	31
63	Design of a Wideband High-Voltage High-Efficiency BiCMOS Envelope Amplifier for Micro-Base-Station RF Power Amplifiers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2012 , 60, 1850-1861	4.1	18
62	. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2012 , 59, 2111-2124	3.9	38
61	Design of a 4-W Envelope Tracking Power Amplifier With More Than One Octave Carrier Bandwidth. <i>IEEE Journal of Solid-State Circuits</i> , 2012 , 47, 2298-2308	5.5	19
60	Effects of surface micromesas on reverse leakage current in InGaN/GaN Schottky barriers. <i>Journal of Applied Physics</i> , 2012 , 112, 044505	2.5	4

59	COMPUTATIONALLY EFFICIENT MODEL FOR UWB SIGNAL ATTENUATION DUE TO PROPAGATION IN TISSUE FOR BIOMEDICAL IMPLANTS. <i>Progress in Electromagnetics Research B</i> , 2012 , 38, 1-22	0.7	10
58	2012 ,		18
57	Interface-State Modeling of $\text{Al}_{0.2}\text{O}_{0.3}\text{InGaAs}$ MOS From Depletion to Inversion. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 2383-2389	2.9	64
56	Efficiency Enhancement of mm-Wave Power Amplifiers Using Envelope Tracking. <i>IEEE Microwave and Wireless Components Letters</i> , 2011 , 21, 157-159	2.6	20
55	A Distributed Model for Border Traps in $\text{Al}_{0.2}\text{O}_{0.3}\text{InGaAs}$ MOS Devices. <i>IEEE Electron Device Letters</i> , 2011 , 32, 485-487	4.4	147
54	Analysis of Reverse Leakage Current and Breakdown Voltage in GaN and InGaN/GaN Schottky Barriers. <i>IEEE Transactions on Electron Devices</i> , 2011 , 58, 1986-1994	2.9	18
53	Digitally Assisted Dual-Switch High-Efficiency Envelope Amplifier for Envelope-Tracking Base-Station Power Amplifiers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2011 , 59, 2943-2952	4.1	53
52	Charge transfer region at the edge of metal contacts on graphene and its impact on contact resistance measurement 2011 ,		1
51	High Power Digitally-Controlled SOI CMOS Attenuator With Wide Attenuation Range. <i>IEEE Microwave and Wireless Components Letters</i> , 2011 , 21, 433-435	2.6	9
50	Wideband high efficiency envelope tracking integrated circuit for micro-base station power amplifiers 2011 ,		4
49	A Q-Band Amplifier Implemented with Stacked 45-nm CMOS FETs 2011 ,		39
48	GaN Envelope Tracking Power Amplifier with More Than One Octave Carrier Bandwidth 2011 ,		3
47	A 45-GHz SiGe HBT amplifier at greater than 25 % efficiency and 30 mW output power 2011 ,		13
46	Border traps in $\text{Al}_2\text{O}_3/\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ (100) gate stacks and their passivation by hydrogen anneals. <i>Applied Physics Letters</i> , 2010 , 96, 012906	3.4	163
45	Design of Tunneling Field-Effect Transistors Based on Staggered Heterojunctions for Ultralow-Power Applications. <i>IEEE Electron Device Letters</i> , 2010 , 31, 431-433	4.4	94
44	Analysis of Resistance Asymmetry Due to p-n Junctions in Graphene FETs. <i>Materials Research Society Symposia Proceedings</i> , 2010 , 1259, 1		1
43	Enhanced Electromagnetic Interference Shielding Through the Use of Functionalized Carbon-Nanotube-Reactive Polymer Composites. <i>IEEE Nanotechnology Magazine</i> , 2010 , 9, 464-469	2.6	93
42	InGaN/GaN Schottky Diodes With Enhanced Voltage Handling Capability for Varactor Applications. <i>IEEE Electron Device Letters</i> , 2010 , 31, 1119-1121	4.4	16

41	Self-consistent 1-D Schrödinger-Poisson solver for III-V heterostructures accounting for conduction band non-parabolicity. <i>Solid-State Electronics</i> , 2010 , 54, 1257-1262	1.7	15
40	A Watt-Level Stacked-FET Linear Power Amplifier in Silicon-on-Insulator CMOS. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2010 , 58, 57-64	4.1	151
39	Single-Ended and Differential Radial Power Combiners Implemented With a Compact Broadband Probe. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2010 , 58, 1565-1572	4.1	24
38	Enhanced dielectric constants and shielding effectiveness of, uniformly dispersed, functionalized carbon nanotube composites. <i>Applied Physics Letters</i> , 2009 , 94, 243111	3.4	84
37	PERFORMANCE COMPARISON OF SCALED III-V AND Si BALLISTIC NANOWIRE MOSFETs. <i>International Journal of High Speed Electronics and Systems</i> , 2009 , 19, 15-22	0.5	
36	Modeling and Design of RF Amplifiers for Envelope Tracking WCDMA Base-Station Applications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2009 , 57, 2148-2159	4.1	39
35	Atomically abrupt and unpinned Al ₂ O ₃ /In _{0.53} Ga _{0.47} As interfaces: Experiment and simulation. <i>Journal of Applied Physics</i> , 2009 , 106, 124508	2.5	78
34	An analytical model for inductively coupled implantable biomedical devices with ferrite rods. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2009 , 3, 43-52	5.1	49
33	A 25 dBm Digitally Modulated CMOS Power Amplifier for WCDMA/EDGE/OFDM With Adaptive Digital Predistortion and Efficient Power Control. <i>IEEE Journal of Solid-State Circuits</i> , 2009 , 44, 1883-1896	5.5	120
32	High-Efficiency WCDMA Envelope Tracking Base-Station Amplifier Implemented With GaAs HVHBTs. <i>IEEE Journal of Solid-State Circuits</i> , 2009 , 44, 2629-2639	5.5	54
31	PERFORMANCE COMPARISON OF SCALED III-V AND Si BALLISTIC NANOWIRE MOSFETs. <i>Selected Topics in Electronics and Systems</i> , 2009 , 15-22	0	
30	Scaling of Nanowire Transistors. <i>IEEE Transactions on Electron Devices</i> , 2008 , 55, 2846-2858	2.9	112
29	Open-Loop Digital Predistorter for RF Power Amplifiers Using Dynamic Deviation Reduction-Based Volterra Series. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2008 , 56, 1524-1534	4.1	159
28	Digital Predistortion for Envelope-Tracking Power Amplifiers Using Decomposed Piecewise Volterra Series. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2008 , 56, 2237-2247	4.1	98
27	InP HBT millimeter-wave power amplifier implemented using planar radial power combiner 2008 ,		2
26	Efficiency enhancement of W-CDMA base-station envelope tracking power amplifiers via load modulation. <i>Microwave and Optical Technology Letters</i> , 2007 , 49, 1954-1957	1.2	2
25	Reduced temperature S-parameter measurements of 400+GHz sub-micron InP DHBTs. <i>Solid-State Electronics</i> , 2007 , 51, 870-881	1.7	5
24	. <i>IEEE Transactions on Electron Devices</i> , 2007 , 54, 398-409	2.9	2

23	Design of H-Bridge Class-D Power Amplifiers for Digital Pulse Modulation Transmitters. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2007 , 55, 2845-2855	4.1	63
22	A Monolithic High-Efficiency 2.4-GHz 20-dBm SiGe BiCMOS Envelope-Tracking OFDM Power Amplifier. <i>IEEE Journal of Solid-State Circuits</i> , 2007 , 42, 1271-1281	5.5	144
21	H-Bridge Class-D Power Amplifiers for Digital Pulse Modulation Transmitters. <i>IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium</i> , 2007 ,		10
20	CMOS Outphasing Class-D Amplifier With Chireix Combiner. <i>IEEE Microwave and Wireless Components Letters</i> , 2007 , 17, 619-621	2.6	43
19	Physical modeling of degenerately doped compound semiconductors for high-performance HBT design. <i>Solid-State Electronics</i> , 2006 , 50, 1440-1449	1.7	14
18	A numerical Schrödinger-Poisson solver for radially symmetric nanowire core-shell structures. <i>Solid-State Electronics</i> , 2006 , 50, 1732-1739	1.7	37
17	Growth of InGaN HBTs by MOCVD. <i>Journal of Electronic Materials</i> , 2006 , 35, 695-700	1.9	12
16	Digital etching of III-N materials using a two-step Ar/KOH technique. <i>Journal of Electronic Materials</i> , 2006 , 35, 771-776	1.9	6
15	Linearity Improvement of HBT-based Doherty Power Amplifiers Based on a Simple Analytical Model 2006 ,		6
14	An Improved Power-Added Efficiency 19-dBm Hybrid Envelope Elimination and Restoration Power Amplifier for 802.11g WLAN Applications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2006 , 54, 4086-4099	4.1	201
13	A 20 dBm Linear RF Power Amplifier Using Stacked Silicon-on-Sapphire MOSFETs. <i>IEEE Microwave and Wireless Components Letters</i> , 2006 , 16, 684-686	2.6	33
12	Linearity Improvement of HBT-Based Doherty Power Amplifiers Based on a Simple Analytical Model. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2006 , 54, 4479-4488	4.1	36
11	A reusable microfluidic plate with alternate-choice architecture for assessing growth preference in tissue culture. <i>Journal of Neuroscience Methods</i> , 2005 , 144, 79-89	3	33
10	Minority carrier transport properties of GaInNAs heterojunction bipolar transistors with 2% nitrogen. <i>Journal of Applied Physics</i> , 2004 , 95, 327-333	2.5	11
9	ANALYSIS OF HIGH DC CURRENT GAIN STRUCTURES FOR GaN/InGaN/GaN HBTs. <i>International Journal of High Speed Electronics and Systems</i> , 2004 , 14, 825-830	0.5	1
8	Long Time-Constant Trap Effects in Nitride Heterostructure Field Effect Transistors. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 622, 6281		7
7	Photoemission studies on heterostructure bipolar transistors. <i>Solid-State Electronics</i> , 1999 , 43, 1555-1560		7
6	Piezoelectric polarization associated with dislocations in wurtzite GaN. <i>Applied Physics Letters</i> , 1999 , 74, 573-575	3.4	51

5	HIGH SPEED CROSSPOINT SWITCHES. <i>Selected Topics in Electornics and Systems</i> , 1999 , 193-236	o	o
4	Development of HBT structure to minimize parasitic elements. <i>Solid-State Electronics</i> , 1995 , 38, 1691-1695	9	
3	Photoreflectance characterization of an InP/InGaAs heterojunction bipolar transistor structure. <i>Applied Physics Letters</i> , 1992 , 61, 2066-2068	3-4	29
2	Advanced GaAs-Based HBT Designs for Wireless Communications Systems39-77		
1	Power Amplifier Approaches for High Efficiency and Linearity189-227		3