Herbert Zirath

List of Publications by Citations

113 papers	3,792 citations	24 h-index	60 g-index
124 ext. papers	4,534 ext. citations	3.1 avg, IF	5 L-index

#	Paper	IF	Citations
113	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. *Nanoscale*, **2015**, 7, 4598-810	7.7	2015
112	. *IEEE Transactions on Terahertz Science and Technology*, **2016**, 6, 592-600	3.4	102
111	Design of Varactor-Based Tunable Matching Networks for Dynamic Load Modulation of High Power Amplifiers. *IEEE Transactions on Microwave Theory and Techniques*, **2009**, 57, 1110-1118	4.1	95
110	Design of a Highly Efficient 2-4-GHz Octave Bandwidth GaN-HEMT Power Amplifier. *IEEE Transactions on Microwave Theory and Techniques*, **2010**, 58, 1677-1685	4.1	91
109	Metallic 3-D Printed Rectangular Waveguides for Millimeter-Wave Applications. *IEEE Transactions on Components, Packaging and Manufacturing Technology*, **2016**, 6, 796-804	1.7	81
108	A D-Band 48-Gbit/s 64-QAM/QPSK Direct-Conversion I/Q Transceiver Chipset. *IEEE Transactions on Microwave Theory and Techniques*, **2016**, 64, 1285-1296	4.1	62
107	I/Q Imbalance Compensation Using a Nonlinear Modeling Approach. *IEEE Transactions on Microwave Theory and Techniques*, **2009**, 57, 513-518	4.1	61
106	Calculation of the Performance of Communication Systems From Measured Oscillator Phase Noise. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2014**, 61, 1553-1565	3.9	57
105	60 GHz Single-Chip Front-End MMICs and Systems for Multi-Gb/s Wireless Communication. *IEEE Journal of Solid-State Circuits*, **2007**, 42, 1143-1157	5.5	54
104	W -Band Low-Profile Monopulse Slot Array Antenna Based on Gap Waveguide Corporate-Feed Network. *IEEE Transactions on Antennas and Propagation*, **2018**, 66, 6997-7009	4.9	50
103	Operation of InGaAs/InP-Based Ballistic Rectifiers at Room Temperature and Frequencies up to 50 GHz. *Japanese Journal of Applied Physics*, **2001**, 40, L909-L911	1.4	48
102	A Metallic 3-D Printed E-Band Radio Front End. *IEEE Microwave and Wireless Components Letters*, **2016**, 26, 331-333	2.6	46
101	InP DHBT Distributed Amplifiers With Up to 235-GHz Bandwidth. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 1334-1341	4.1	42
100	Single-Chip Frequency Multiplier Chains for Millimeter-Wave Signal Generation. *IEEE Transactions on Microwave Theory and Techniques*, **2009**, 57, 3134-3142	4.1	37
99	Oxygen Ion Implantation Isolation Planar Process for AlGaN/GaN HEMTs. *IEEE Electron Device Letters*, **2007**, 28, 476-478	4.4	37
98	A 220 GHz Single-Chip Receiver MMIC With Integrated Antenna. *IEEE Microwave and Wireless Components Letters*, **2008**, 18, 284-286	2.6	33
97	Integration of a 140 GHz Packaged LTCC Grid Array Antenna With an InP Detector. *IEEE Transactions on Components, Packaging and Manufacturing Technology*, **2015**, 5, 1060-1068	1.7	32

96	Experimental Investigation of the Accuracy of an Ultrawideband Time-Domain Microwave-Tomographic System. *IEEE Transactions on Instrumentation and Measurement*, **2011**, 60, 3939-3949	5.2	32
95	High-Efficiency LDMOS Power-Amplifier Design at 1 GHz Using an Optimized Transistor Model. *IEEE Transactions on Microwave Theory and Techniques*, **2009**, 57, 1647-1654	4.1	29
94	High-Gain Graphene Transistors with a Thin AlOx Top-Gate Oxide. *Scientific Reports*, **2017**, 7, 2419	4.9	28
93	An SiC MESFET-Based MMIC Process. *IEEE Transactions on Microwave Theory and Techniques*, **2006**, 54, 4072-4078	4.1	26
92	Development of a Time Domain Microwave System for Medical Diagnostics. *IEEE Transactions on Instrumentation and Measurement*, **2014**, 63, 2931-2939	5.2	25
91	Accuracy Evaluation of Ultrawideband Time Domain Systems for Microwave Imaging. *IEEE Transactions on Antennas and Propagation*, **2011**, 59, 4279-4285	4.9	25
90	. *IEEE Journal of Microwaves*, **2021**, 1, 86-100		25
89	A W-band MMIC Resistive Mixer Based on Epitaxial Graphene FET. *IEEE Microwave and Wireless Components Letters*, **2017**, 27, 168-170	2.6	24
88	Compact Integrated Full-Duplex Gap Waveguide-Based Radio Front End For Multi-Gbit/s Point-to-Point Backhaul Links at E-Band. *IEEE Transactions on Microwave Theory and Techniques*, **2019**, 67, 3783-3797	4.1	24
87	Novel Air-Filled Waveguide Transmission Line Based on Multilayer Thin Metal Plates. *IEEE Transactions on Terahertz Science and Technology*, **2019**, 9, 282-290	3.4	24
86	Graphene FET Gigabit ON□OFF Keying Demodulator at 96 GHz. *IEEE Electron Device Letters*, **2016**, 37, 333-336	4.4	23
85	A General Statistical Equivalent-Circuit-Based De-Embedding Procedure for High-Frequency Measurements. *IEEE Transactions on Microwave Theory and Techniques*, **2008**, 56, 2692-2700	4.1	22
84	High Efficiency LDMOS Current Mode Class-D Power amplifier at 1 GHz **2006**,		21
83	Design of Low Phase-Noise Oscillators and Wideband VCOs in InGaP HBT Technology. *IEEE Transactions on Microwave Theory and Techniques*, **2012**, 60, 3420-3430	4.1	19
82	A broadband differential cascode power amplifier in 45 nm CMOS for high-speed 60 GHz system-on-chip **2010**,		19
81	A 220 GHz (G-Band) Microstrip MMIC Single-Ended Resistive Mixer. *IEEE Microwave and Wireless Components Letters*, **2008**, 18, 215-217	2.6	19
80	High-frequency noise and current-voltage characteristics of mm-wave platinum n□+□GaAs Schottky barrier diodes. *Journal of Applied Physics*, **1986**, 60, 1399-1407	2.5	19
79	Toward Industrial Exploitation of THz Frequencies: Integration of SiGe MMICs in Silicon-Micromachined Waveguide Systems. *IEEE Transactions on Terahertz Science and Technology*, **2019**, 9, 624-636	3.4	18

78	An Energy Efficient 56 Gbps PAM-4 VCSEL Transmitter Enabled by a 100 Gbps Driver in 0.25 μm InP DHBT Technology. *Journal of Lightwave Technology*, **2016**, 34, 4954-4964	4	17
77	A D -Band Packaged Antenna on Organic Substrate With High Fault Tolerance for Mass Production. *IEEE Transactions on Components, Packaging and Manufacturing Technology*, **2016**, 6, 359-365	1.7	17
76	340 GHz Integrated Receiver in 250 nm InP DHBT Technology. *IEEE Transactions on Terahertz Science and Technology*, **2012**, 2, 306-314	3.4	17
75	Millimeter Wave E-Plane Transition From Waveguide to Microstrip Line With Large Substrate Size Related to MMIC Integration. *IEEE Microwave and Wireless Components Letters*, **2016**, 26, 481-483	2.6	17
74	A SiC Varactor With Large Effective Tuning Range for Microwave Power Applications. *IEEE Electron Device Letters*, **2011**, 32, 788-790	4.4	16
73	Does LO Noise Floor Limit Performance in Multi-Gigabit Millimeter-Wave Communication?. *IEEE Microwave and Wireless Components Letters*, **2017**, 27, 769-771	2.6	14
72	Accurate Modeling of GaN HEMT RF Behavior Using an Effective Trapping Potential. *IEEE Transactions on Microwave Theory and Techniques*, **2018**, 66, 845-857	4.1	13
71	Accurate Phase-Noise Prediction for a Balanced Colpitts GaN HEMT MMIC Oscillator. *IEEE Transactions on Microwave Theory and Techniques*, **2013**, 61, 3916-3926	4.1	13
70	Monolithically Integrated 200-GHz Double-Slot Antenna and Resistive Mixers in a GaAs-mHEMT MMIC Process. *IEEE Transactions on Microwave Theory and Techniques*, **2011**, 59, 2494-2503	4.1	13
69	Influence of White LO Noise on Wideband Communication. *IEEE Transactions on Microwave Theory and Techniques*, **2018**, 66, 3349-3359	4.1	11
68	140–220-GHz DHBT Detectors. *IEEE Transactions on Microwave Theory and Techniques*, **2013**, 61, 2353-2360	4.1	11
67	60 GHz Broadband MS-to-CPW Hot-Via Flip Chip Interconnects. *IEEE Microwave and Wireless Components Letters*, **2007**, 17, 784-786	2.6	11
66	InP DHBT Amplifier Modules Operating Between 150–300 GHz Using Membrane Technology. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 433-440	4.1	10
65	W-Band Graphene-Based Six-Port Receiver. *IEEE Microwave and Wireless Components Letters*, **2018**, 28, 347-349	2.6	10
64	InP DHBT wideband amplifiers with up to 235 GHz bandwidth **2014**,		10
63	An Image Reject Mixer for High-Speed E-Band (71-76, 81-86 GHz) Wireless Communication **2009**,		10
62	Impact of Channel Thickness on the Large-Signal Performance in InAlGaN/AlN/GaN HEMTs With an AlGaN Back Barrier. *IEEE Transactions on Electron Devices*, **2019**, 66, 364-371	2.9	10
61	Spectrum Efficient D-band Communication Link for Real-time Multi-gigabit Wireless Transmission **2018**,		10

60	Experimental Demonstration of Spectrally Efficient Frequency Division Multiplexing Transmissions at E-Band. *IEEE Transactions on Microwave Theory and Techniques*, **2019**, 67, 1911-1923	4.1	9
59	Silicon Taper Based D -Band Chip to Waveguide Interconnect for Millimeter-Wave Systems. *IEEE Microwave and Wireless Components Letters*, **2017**, 27, 1092-1094	2.6	8
58	A linear 70-95 GHz differential IQ modulator for E-band wireless communication **2010**,		8
57	Suppression of Parasitic Substrate Modes in Multilayer Integrated Circuits. *IEEE Transactions on Electromagnetic Compatibility*, **2015**, 57, 591-594	2	7
56	Nongalvanic Generic Packaging Solution Demonstrated in a Fully Integrated D-Band Receiver. *IEEE Transactions on Terahertz Science and Technology*, **2020**, 10, 321-330	3.4	7
55	4-8 GHz Low Noise Amplifiers using metamorphic HEMT Technology **2006**,		7
54	Performance Evaluation of a Time-Domain Microwave System for Medical Diagnostics. *IEEE Transactions on Instrumentation and Measurement*, **2019**, 68, 2880-2889	5.2	7
53	RF-MEMS Tuned GaN HEMT based Cavity Oscillator for X-band. *IEEE Microwave and Wireless Components Letters*, **2017**, 27, 46-48	2.6	6
52	Design of Flip-Chip Interconnect Using Epoxy-Based Underfill Up to V -Band Frequencies With Excellent Reliability. *IEEE Transactions on Microwave Theory and Techniques*, **2010**, 58, 2244-2250	4.1	6
51	Q-, V-, and W-band power amplifiers utilizing coupled lines for impedance matching **2008**,		6
50	Demonstration of +100-GHz Interconnects in eWLB Packaging Technology. *IEEE Transactions on Components, Packaging and Manufacturing Technology*, **2019**, 9, 1406-1414	1.7	5
49	8-PSK Upconverting Transmitter Using E -Band Frequency Sextupler. *IEEE Microwave and Wireless Components Letters*, **2018**, 28, 177-179	2.6	5
48	A non-galvanic D-band MMIC-to-waveguide transition using eWLB packaging technology **2017**,		5
47	A Load Modulated High Efficiency Power Amplifier **2006**,		5
46	A Hardware Efficient Implementation of a Digital Baseband Receiver for High-Capacity Millimeter-Wave Radios. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 1683-1692	4.1	4
45	Coded Pilot Assisted Baseband Receiver for High Data Rate Millimeter-Wave Communications. *IEEE Transactions on Microwave Theory and Techniques*, **2020**, 68, 4719-4727	4.1	4
44	Waveguide Bandpass Filters for Millimeter-Wave Radiometers. *Journal of Infrared, Millimeter, and Terahertz Waves*, **2013**, 34, 824-836	2.2	4
43	Ultra-broadband common collector-cascode 4-cell distributed amplifier in 250nm InP HBT technology with over 200 GHz bandwidth **2017**,		4

42	A 14 Gbps On-/Off- Keying Modulator in GaAs HBT Technology. *IEEE Microwave and Wireless Components Letters*, **2012**, 22, 272-274	2.6	4
41	H-band MMIC amplifiers in 250 nm InP DHBT **2012**,		4
40	Highly Integrated E-Band Direct Conversion Receiver **2012**,		4
39	Design and Performance Evaluation of a Time Domain Microwave Imaging System. *International Journal of Microwave Science and Technology*, **2013**, 2013, 1-11		4
38	An E-Band(71–76, 81–86 GHz) balanced frequency tripler for high-speed communications **2009**,		4
37	A Compact Cascode Power Amplifier in 45-nm CMOS for 60-GHz Wireless Systems **2009**,		4
36	A direct conversion quadrature transmitter with digital interface in 45 nm CMOS for high-speed 60 GHz communications **2011**,		4
35	A broadband 60-to-120 GHz single-chip MMIC multiplier chain **2009**,		4
34	Low phase-noise balanced Colpitt InGaP-GaAs HBT VCOs with wide frequency tuning range and small VCO-gain variation **2007**,		4
33	Design of highly efficient, high output power, L-band class D.1 RF power amplifiers using GaN MESFET devices **2007**,		4
32	OFDM Radar Range Accuracy Enhancement Using Fractional Fourier Transformation and Phase Analysis Techniques. *IEEE Sensors Journal*, **2020**, 20, 1011-1018	4	4
31	Micrometer Accuracy Phase Modulated Radar for Distance Measurement and Monitoring. *IEEE Sensors Journal*, **2020**, 20, 2919-2927	4	4
30	A Synchronous Baseband Receiver for High-Data-Rate Millimeter-Wave Communication Systems. *IEEE Microwave and Wireless Components Letters*, **2019**, 29, 412-414	2.6	3
29	. *IEEE Transactions on Electron Devices*, **2019**, 66, 2910-2915	2.9	3
28	Investigation of stimulus signals for a time domain microwave imaging system. *IET Microwaves, Antennas and Propagation*, **2017**, 11, 1636-1643	1.6	3
27	Dual-input nonlinear modeling for I/Q modulator distortion compensation **2009**,		3
26	Compact Low-Loss Chip-to-Waveguide and Chip-to-Chip Packaging Concept Using EBG Structures. *IEEE Microwave and Wireless Components Letters*, **2021**, 31, 9-12	2.6	3
25	Integrated wideband and low phase-noise signal source using two voltage-controlled oscillators and a mixer. *IET Microwaves, Antennas and Propagation*, **2013**, 7, 123-130	1.6	2

24	An X-Band Low Phase Noise AlGaN-GaN-HEMT MMIC Push-Push Oscillator **2011**,		2
23	Multifunction low noise millimeterwave MMICs for remote sensing **2012**,		2
22	An 1 GHz Class E LDMOS Power Amplifier **2003**,		2
21	Measurement of Reflection and Transmission Coefficients Using Finite Impulse Response Least-Squares Estimation. *IEEE Transactions on Microwave Theory and Techniques*, **2020**, 68, 222-235	4.1	2
20	Low-cost D-band Waveguide Transition on LCP Substrate **2018**,		2
19	Multi-functional D-band I/Q modulator/demodulator MMICs in SiGe BiCMOS technology. *International Journal of Microwave and Wireless Technologies*, **2018**, 10, 596-604	0.8	2
18	A Compact PCB Gasket for Waveguide Leakage Suppression at 110-170 GHz **2020**,		1
17	Octave Band Linear MMIC Amplifier With +40-dBm OIP3 for High-Reliability Space Applications. *IEEE Transactions on Microwave Theory and Techniques*, **2016**, 64, 2059-2067	4.1	1
16	High linearity MMIC power amplifier design with controlled junction temperature **2014**,		1
15	Imaging front-end for thermal detection using an InP DHBT process **2014**,		1
14	Evaluation of a GaN HEMT transistor for load- and supply-modulation applications using intrinsic waveform measurements **2010**,		1
13	Design of high efficiency Ka-band harmonically tuned power amplifiers **2009**,		1
12	Design of highly efficient, high output power, L-band class D-1 RF power amplifiers using GaN MESFET devices. **2007**,		1
11	Newly developed chip sets for 60 GHz radio communication systems **2007**,		1
10	Design of highly efficient, high output power, L-band class D-1 RF power amplifiers using GaN MESFET devices **2007**,		1
9	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2020**, 67, 3804-3814	3.9	1
8	**2019**,		1
7	F-band Low-loss Tapered Slot Transition for Millimeter-wave System Packaging **2019**,		1

6	Generic Graphene Based Components and Circuits for Millimeter Wave High Data-rate Communication Systems. *MRS Advances*, **2017**, 2, 3559-3564	0.7	0
5	Design and evaluation of 20-GHz power amplifiers in 130-nm CMOS. *International Journal of Microwave and Wireless Technologies*, **2009**, 1, 301-307	0.8	0
4	Analysis of a MEMS Tuned Cavity Oscillator on X -Band. *IEEE Transactions on Microwave Theory and Techniques*, **2017**, 65, 3257-3268	4.1	
3	A low-phase noise D-band signal source based on 130 nm SiGe BiCMOS and 0.15 μm AlGaN/GaN HEMT technologies. *International Journal of Microwave and Wireless Technologies*, **2019**, 11, 456-465	0.8	
2	A D-Band Dual-Mode Dynamic Frequency Divider in 130-nm SiGe Technology. *IEEE Microwave and Wireless Components Letters*, **2020**, 30, 1169-1172	2.6	
1	Development of 60 GHz front End circuits for high data rate communication system at Chalmers University **2006**, 29, 1173-1183		