

# Herbert Zirath

## 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.

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	Compact Low-Loss Chip-to-Waveguide and Chip-to-Chip Packaging Concept Using EBG Structures. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2021</b> , 31, 9-12	2.6	3
112	. <i>IEEE Journal of Microwaves</i> , <b>2021</b> , 1, 86-100		25
111	A D-Band Dual-Mode Dynamic Frequency Divider in 130-nm SiGe Technology. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2020</b> , 30, 1169-1172	2.6	
110	A Compact PCB Gasket for Waveguide Leakage Suppression at 110-170 GHz <b>2020</b> ,		1
109	Coded Pilot Assisted Baseband Receiver for High Data Rate Millimeter-Wave Communications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2020</b> , 68, 4719-4727	4.1	4
108	Nongalvanic Generic Packaging Solution Demonstrated in a Fully Integrated D-Band Receiver. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2020</b> , 10, 321-330	3.4	7
107	OFDM Radar Range Accuracy Enhancement Using Fractional Fourier Transformation and Phase Analysis Techniques. <i>IEEE Sensors Journal</i> , <b>2020</b> , 20, 1011-1018	4	4
106	Measurement of Reflection and Transmission Coefficients Using Finite Impulse Response Least-Squares Estimation. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2020</b> , 68, 222-235	4.1	2
105	Micrometer Accuracy Phase Modulated Radar for Distance Measurement and Monitoring. <i>IEEE Sensors Journal</i> , <b>2020</b> , 20, 2919-2927	4	4
104	. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2020</b> , 67, 3804-3814	3.9	1
103	Toward Industrial Exploitation of THz Frequencies: Integration of SiGe MMICs in Silicon-Micromachined Waveguide Systems. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2019</b> , 9, 624-636	3.4	18
102	Demonstration of +100-GHz Interconnects in eWLB Packaging Technology. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , <b>2019</b> , 9, 1406-1414	1.7	5
101	Compact Integrated Full-Duplex Gap Waveguide-Based Radio Front End For Multi-Gbit/s Point-to-Point Backhaul Links at E-Band. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2019</b> , 67, 3783-3797	4.1	24
100	Experimental Demonstration of Spectrally Efficient Frequency Division Multiplexing Transmissions at E-Band. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2019</b> , 67, 1911-1923	4.1	9
99	Novel Air-Filled Waveguide Transmission Line Based on Multilayer Thin Metal Plates. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2019</b> , 9, 282-290	3.4	24
98	A low-phase noise D-band signal source based on 130 nm SiGe BiCMOS and 0.15 $\mu\text{m}$ AlGaIn/GaN HEMT technologies. <i>International Journal of Microwave and Wireless Technologies</i> , <b>2019</b> , 11, 456-465	0.8	
97	A Synchronous Baseband Receiver for High-Data-Rate Millimeter-Wave Communication Systems. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2019</b> , 29, 412-414	2.6	3

96	. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 2910-2915	2.9	3
95	<b>2019</b> ,		1
94	F-band Low-loss Tapered Slot Transition for Millimeter-wave System Packaging <b>2019</b> ,		1
93	Impact of Channel Thickness on the Large-Signal Performance in InAlGa <sub>N</sub> /AlN/GaN HEMTs With an AlGa <sub>N</sub> Back Barrier. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 364-371	2.9	10
92	Performance Evaluation of a Time-Domain Microwave System for Medical Diagnostics. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2019</b> , 68, 2880-2889	5.2	7
91	Accurate Modeling of GaN HEMT RF Behavior Using an Effective Trapping Potential. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2018</b> , 66, 845-857	4.1	13
90	Influence of White LO Noise on Wideband Communication. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2018</b> , 66, 3349-3359	4.1	11
89	W-Band Graphene-Based Six-Port Receiver. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2018</b> , 28, 347-349	2.6	10
88	8-PSK Upconverting Transmitter Using $\Sigma\Xi$ -Band Frequency Sextupler. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2018</b> , 28, 177-179	2.6	5
87	Low-cost D-band Waveguide Transition on LCP Substrate <b>2018</b> ,		2
86	$\Sigma W\Sigma$ -Band Low-Profile Monopulse Slot Array Antenna Based on Gap Waveguide Corporate-Feed Network. <i>IEEE Transactions on Antennas and Propagation</i> , <b>2018</b> , 66, 6997-7009	4.9	50
85	Multi-functional D-band I/Q modulator/demodulator MMICs in SiGe BiCMOS technology. <i>International Journal of Microwave and Wireless Technologies</i> , <b>2018</b> , 10, 596-604	0.8	2
84	Spectrum Efficient D-band Communication Link for Real-time Multi-gigabit Wireless Transmission <b>2018</b> ,		10
83	A W-band MMIC Resistive Mixer Based on Epitaxial Graphene FET. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2017</b> , 27, 168-170	2.6	24
82	High-Gain Graphene Transistors with a Thin AlO <sub>x</sub> Top-Gate Oxide. <i>Scientific Reports</i> , <b>2017</b> , 7, 2419	4.9	28
81	Analysis of a MEMS Tuned Cavity Oscillator on $\Sigma X\Sigma$ -Band. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2017</b> , 65, 3257-3268	4.1	
80	RF-MEMS Tuned GaN HEMT based Cavity Oscillator for X-band. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2017</b> , 27, 46-48	2.6	6
79	Does LO Noise Floor Limit Performance in Multi-Gigabit Millimeter-Wave Communication?. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2017</b> , 27, 769-771	2.6	14

78	Generic Graphene Based Components and Circuits for Millimeter Wave High Data-rate Communication Systems. <i>MRS Advances</i> , <b>2017</b> , 2, 3559-3564	0.7	0
77	A non-galvanic D-band MMIC-to-waveguide transition using eWLB packaging technology <b>2017</b> ,		5
76	Silicon Taper Based $\text{\$D\$}$ -Band Chip to Waveguide Interconnect for Millimeter-Wave Systems. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2017</b> , 27, 1092-1094	2.6	8
75	Investigation of stimulus signals for a time domain microwave imaging system. <i>IET Microwaves, Antennas and Propagation</i> , <b>2017</b> , 11, 1636-1643	1.6	3
74	Ultra-broadband common collector-cascode 4-cell distributed amplifier in 250nm InP HBT technology with over 200 GHz bandwidth <b>2017</b> ,		4
73	An Energy Efficient 56 Gbps PAM-4 VCSEL Transmitter Enabled by a 100 Gbps Driver in 0.25 $\mu\text{m}$ InP DHBT Technology. <i>Journal of Lightwave Technology</i> , <b>2016</b> , 34, 4954-4964	4	17
72	Octave Band Linear MMIC Amplifier With +40-dBm OIP3 for High-Reliability Space Applications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2016</b> , 64, 2059-2067	4.1	1
71	A Metallic 3-D Printed E-Band Radio Front End. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2016</b> , 26, 331-333	2.6	46
70	Metallic 3-D Printed Rectangular Waveguides for Millimeter-Wave Applications. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , <b>2016</b> , 6, 796-804	1.7	81
69	Graphene FET Gigabit ON/OFF Keying Demodulator at 96 GHz. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 333-336	4.4	23
68	A $\text{\$D\$}$ -Band Packaged Antenna on Organic Substrate With High Fault Tolerance for Mass Production. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , <b>2016</b> , 6, 359-365	1.7	17
67	Millimeter Wave E-Plane Transition From Waveguide to Microstrip Line With Large Substrate Size Related to MMIC Integration. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2016</b> , 26, 481-483	2.6	17
66	. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2016</b> , 6, 592-600	3.4	102
65	A $\text{\$D\$}$ -Band 48-Gbit/s 64-QAM/QPSK Direct-Conversion I/Q Transceiver Chipset. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2016</b> , 64, 1285-1296	4.1	62
64	InP DHBT Amplifier Modules Operating Between 150-300 GHz Using Membrane Technology. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2015</b> , 63, 433-440	4.1	10
63	Suppression of Parasitic Substrate Modes in Multilayer Integrated Circuits. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2015</b> , 57, 591-594	2	7
62	A Hardware Efficient Implementation of a Digital Baseband Receiver for High-Capacity Millimeter-Wave Radios. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2015</b> , 63, 1683-1692	4.1	4
61	InP DHBT Distributed Amplifiers With Up to 235-GHz Bandwidth. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2015</b> , 63, 1334-1341	4.1	42

60	Integration of a 140 GHz Packaged LTCC Grid Array Antenna With an InP Detector. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , <b>2015</b> , 5, 1060-1068	1.7	32
59	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. <i>Nanoscale</i> , <b>2015</b> , 7, 4598-810	7.7	2015
58	High linearity MMIC power amplifier design with controlled junction temperature <b>2014</b> ,		1
57	Calculation of the Performance of Communication Systems From Measured Oscillator Phase Noise. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2014</b> , 61, 1553-1565	3.9	57
56	Imaging front-end for thermal detection using an InP DHBT process <b>2014</b> ,		1
55	InP DHBT wideband amplifiers with up to 235 GHz bandwidth <b>2014</b> ,		10
54	Development of a Time Domain Microwave System for Medical Diagnostics. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2014</b> , 63, 2931-2939	5.2	25
53	Integrated wideband and low phase-noise signal source using two voltage-controlled oscillators and a mixer. <i>IET Microwaves, Antennas and Propagation</i> , <b>2013</b> , 7, 123-130	1.6	2
52	Accurate Phase-Noise Prediction for a Balanced Colpitts GaN HEMT MMIC Oscillator. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2013</b> , 61, 3916-3926	4.1	13
51	Waveguide Bandpass Filters for Millimeter-Wave Radiometers. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , <b>2013</b> , 34, 824-836	2.2	4
50	140-20-GHz DHBT Detectors. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2013</b> , 61, 2353-2360	4.1	11
49	Design and Performance Evaluation of a Time Domain Microwave Imaging System. <i>International Journal of Microwave Science and Technology</i> , <b>2013</b> , 2013, 1-11		4
48	A 14 Gbps On-/Off- Keying Modulator in GaAs HBT Technology. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2012</b> , 22, 272-274	2.6	4
47	H-band MMIC amplifiers in 250 nm InP DHBT <b>2012</b> ,		4
46	Design of Low Phase-Noise Oscillators and Wideband VCOs in InGaP HBT Technology. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2012</b> , 60, 3420-3430	4.1	19
45	Highly Integrated E-Band Direct Conversion Receiver <b>2012</b> ,		4
44	340 GHz Integrated Receiver in 250 nm InP DHBT Technology. <i>IEEE Transactions on Terahertz Science and Technology</i> , <b>2012</b> , 2, 306-314	3.4	17
43	Multifunction low noise millimeterwave MMICs for remote sensing <b>2012</b> ,		2

42	Monolithically Integrated 200-GHz Double-Slot Antenna and Resistive Mixers in a GaAs-mHEMT MMIC Process. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2011</b> , 59, 2494-2503	4.1	13
41	Experimental Investigation of the Accuracy of an Ultrawideband Time-Domain Microwave-Tomographic System. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2011</b> , 60, 3939-3949	5.2	32
40	Accuracy Evaluation of Ultrawideband Time Domain Systems for Microwave Imaging. <i>IEEE Transactions on Antennas and Propagation</i> , <b>2011</b> , 59, 4279-4285	4.9	25
39	A SiC Varactor With Large Effective Tuning Range for Microwave Power Applications. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 788-790	4.4	16
38	An X-Band Low Phase Noise AlGaIn-GaN-HEMT MMIC Push-Push Oscillator <b>2011</b> ,		2
37	A direct conversion quadrature transmitter with digital interface in 45 nm CMOS for high-speed 60 GHz communications <b>2011</b> ,		4
36	Evaluation of a GaN HEMT transistor for load- and supply-modulation applications using intrinsic waveform measurements <b>2010</b> ,		1
35	Design of a Highly Efficient 2 $\pi$ -GHz Octave Bandwidth GaN-HEMT Power Amplifier. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2010</b> , 58, 1677-1685	4.1	91
34	A linear 70-95 GHz differential IQ modulator for E-band wireless communication <b>2010</b> ,		8
33	A broadband differential cascode power amplifier in 45 nm CMOS for high-speed 60 GHz system-on-chip <b>2010</b> ,		19
32	Design of Flip-Chip Interconnect Using Epoxy-Based Underfill Up to $\nu$ -Band Frequencies With Excellent Reliability. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2010</b> , 58, 2244-2250	4.1	6
31	An E-Band(71 $\pi$ 6, 81 $\pi$ 6 GHz) balanced frequency tripler for high-speed communications <b>2009</b> ,		4
30	Design and evaluation of 20-GHz power amplifiers in 130-nm CMOS. <i>International Journal of Microwave and Wireless Technologies</i> , <b>2009</b> , 1, 301-307	0.8	0
29	I/Q Imbalance Compensation Using a Nonlinear Modeling Approach. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2009</b> , 57, 513-518	4.1	61
28	High-Efficiency LDMOS Power-Amplifier Design at 1 GHz Using an Optimized Transistor Model. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2009</b> , 57, 1647-1654	4.1	29
27	A Compact Cascode Power Amplifier in 45-nm CMOS for 60-GHz Wireless Systems <b>2009</b> ,		4
26	Design of Varactor-Based Tunable Matching Networks for Dynamic Load Modulation of High Power Amplifiers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2009</b> , 57, 1110-1118	4.1	95
25	Single-Chip Frequency Multiplier Chains for Millimeter-Wave Signal Generation. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2009</b> , 57, 3134-3142	4.1	37

24	Design of high efficiency Ka-band harmonically tuned power amplifiers <b>2009</b> ,		1
23	An Image Reject Mixer for High-Speed E-Band (71-76, 81-86 GHz) Wireless Communication <b>2009</b> ,		10
22	Dual-input nonlinear modeling for I/Q modulator distortion compensation <b>2009</b> ,		3
21	A broadband 60-to-120 GHz single-chip MMIC multiplier chain <b>2009</b> ,		4
20	Q-, V-, and W-band power amplifiers utilizing coupled lines for impedance matching <b>2008</b> ,		6
19	A 220 GHz Single-Chip Receiver MMIC With Integrated Antenna. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2008</b> , 18, 284-286	2.6	33
18	A General Statistical Equivalent-Circuit-Based De-Embedding Procedure for High-Frequency Measurements. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2008</b> , 56, 2692-2700	4.1	22
17	A 220 GHz (G-Band) Microstrip MMIC Single-Ended Resistive Mixer. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2008</b> , 18, 215-217	2.6	19
16	Design of highly efficient, high output power, L-band class D-1 RF power amplifiers using GaN MESFET devices. <b>2007</b> ,		1
15	Newly developed chip sets for 60 GHz radio communication systems <b>2007</b> ,		1
14	60 GHz Broadband MS-to-CPW Hot-Via Flip Chip Interconnects. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2007</b> , 17, 784-786	2.6	11
13	Low phase-noise balanced Colpitt InGaP-GaAs HBT VCOs with wide frequency tuning range and small VCO-gain variation <b>2007</b> ,		4
12	Design of highly efficient, high output power, L-band class D-1 RF power amplifiers using GaN MESFET devices <b>2007</b> ,		1
11	Design of highly efficient, high output power, L-band class D.1 RF power amplifiers using GaN MESFET devices <b>2007</b> ,		4
10	60 GHz Single-Chip Front-End MMICs and Systems for Multi-Gb/s Wireless Communication. <i>IEEE Journal of Solid-State Circuits</i> , <b>2007</b> , 42, 1143-1157	5.5	54
9	Oxygen Ion Implantation Isolation Planar Process for AlGaIn/GaN HEMTs. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 476-478	4.4	37
8	High Efficiency LDMOS Current Mode Class-D Power amplifier at 1 GHz <b>2006</b> ,		21
7	4-8 GHz Low Noise Amplifiers using metamorphic HEMT Technology <b>2006</b> ,		7

6	Development of 60 GHz front End circuits for high data rate communication system at Chalmers University <b>2006</b> , 29, 1173-1183		
5	An SiC MESFET-Based MMIC Process. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2006</b> , 54, 4072-4078	4.1	26
4	A Load Modulated High Efficiency Power Amplifier <b>2006</b> ,		5
3	An 1 GHz Class E LDMOS Power Amplifier <b>2003</b> ,		2
2	Operation of InGaAs/InP-Based Ballistic Rectifiers at Room Temperature and Frequencies up to 50 GHz. <i>Japanese Journal of Applied Physics</i> , <b>2001</b> , 40, L909-L911	1.4	48
1	High-frequency noise and current-voltage characteristics of mm-wave platinum n <sup>+</sup> -GaAs Schottky barrier diodes. <i>Journal of Applied Physics</i> , <b>1986</b> , 60, 1399-1407	2.5	19