Nils G Weimann

List of Publications by Year
in descending order

126 papers	6,943 citations	279487 23 h-index	95083 68 g-index
127 all docs	127 docs citations	127 times ranked	4768 citing authors

#	Article	IF	Citations
1	A Modular MIMO Millimeter-Wave Imaging Radar System for Space Applications and Its Components. Journal of Infrared, Millimeter, and Terahertz Waves, 2021, 42, 275-324.	1.2	5
2	Tunnelingâ€Related Leakage Currents in Coaxial GaAs/InGaP Nanowire Heterojunction Bipolar Transistors. Physica Status Solidi (B): Basic Research, 2021, 258, 2000395.	0.7	3
3	Connecting Chips With More Than 100 GHz Bandwidth. IEEE Journal of Microwaves, 2021, 1, 364-373.	4.9	20
4	There is Plenty of Room for THz Tunneling Electron Devices Beyond the Transit Time Limit. IEEE Electron Device Letters, 2021, 42, 224-227.	2.2	3
5	Design of a 1-to-4 Subarray Element for Wireless Subharmonic Injection in the THz Band. , 2021, , .		2
6	THz Detectors and Emitters with On-Chip Antenna aligned on Hyper-Hemispherical Silicon Lenses. , 2021, , .		2
7	Polarity-controlled AlN/Si templates by in situ oxide desorption for variably arrayed MOVPE-GaN nanowires. Journal of Crystal Growth, 2021, 566-567, 126162.	0.7	2
8	Broadband THz Detection Using InP Triple-Barrier Resonant Tunneling Diode With Integrated Antenna. , 2021, , .		5
9	nâ€Doped InGaP Nanowire Shells in GaAs/InGaP Coreâ€"Shell pâ€"n Junctions. Physica Status Solidi (B): Basic Research, 2020, 257, 1900358.	0.7	3
10	The accurate predictions of THz quantum currents requires a new displacement current coefficient instead of the traditional transmission one. , 2020, , .		2
11	A systematic study of Ga- and N-polar GaN nanowireâ€"shell growth by metal organic vapor phase epitaxy. CrystEngComm, 2020, 22, 5522-5532.	1.3	7
12	InP HBT technology for THz applications. , 2020, , .		2
13	Large-Signal Modelling of sub-THz InP Triple-Barrier Resonant Tunneling Diodes. , 2020, , .		10
14	Toward Mobile Integrated Electronic Systems at THz Frequencies. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 846-869.	1.2	32
15	Subharmonic Injection Locking for Phase and Frequency Control of RTD-Based THz Oscillator. IEEE Transactions on Terahertz Science and Technology, 2020, 10, 221-224.	2.0	14
16	Spatially controlled VLS epitaxy of gallium arsenide nanowires on gallium nitride layers. CrystEngComm, 2020, 22, 1239-1250.	1.3	5
17	Experimental evidence for the separation of thermally excited bipolar charge carriers within a p-n junction: A new approach to thermoelectric materials and generators. Journal of Applied Physics, 2019, 125, .	1.1	5
18	Antenna design for subharmonic injection-locked triple barrier RTD oscillator in the 300 GHz band. , 2019, , .		3

#	ARTICLE	IF	CITATIONS
19	Characterization of the Effective Tunneling Time and Phase Relaxation Time in Triple-Barrier Resonant Tunneling Diodes. , 2019, , .		1
20	Broadband Detection capability of a Triple Barrier Resonant Tunneling Diode. , 2019, , .		9
21	Thermally stable iridium contacts to highly doped p-In0:53Ga0:47As for indium phosphide double heterojunction bipolar transistors. Microelectronic Engineering, 2019, 215, 111017.	1.1	0
22	Triple-Barrier Resonant-Tunnelling Diode THz Detectors with on-chip antenna. , 2019, , .		7
23	NiCr resistors for terahertz applications in an InP DHBT process. Microelectronic Engineering, 2019, 208, 1-6.	1.1	4
24	n-doped InGaP Nanowire Shells in Core-Shell pn-junctions. , 2019, , .		0
25	A 0.5 THz Signal Source with -11 dBm Peak Output Power Based on InP DHBT. , 2019, , .		1
26	A 0.5 THz Signal Source with -11 dBm Peak Output Power Based on InP DHBT. , 2019, , .		2
27	Transmitarray Element Design for Subharmonic Injection-locked RTD Oscillators in THz Band. , 2019, , .		3
28	Mask-less MOVPE of arrayed n-GaN nanowires on site- and polarity-controlled AlN/Si templates. CrystEngComm, 2019, 21, 7476-7488.	1.3	8
29	Polarityâ€and Siteâ€Controlled Metal Organic Vapor Phase Epitaxy of 3Dâ€GaN on Si(111). Physica Status Solidi (B): Basic Research, 2018, 255, 1700485.	0.7	8
30	An Ultra-broadband Low-Noise Distributed Amplifier in InP DHBT Technology. , 2018, , .		1
31	Highly Efficient D-Band Fundamental Frequency Source Based on InP-DHBT Technology. , 2018, , .		3
32	Toward Nanowire HBT: Reverse Current Reduction in Coaxial GaAs/InGaP n(i)p and n(i)pn Core-Multishell Nanowires. Physica Status Solidi (A) Applications and Materials Science, 2018, 216, 1800562.	0.8	1
33	An Ultra-Broadband Low-Noise Distributed Amplifier in InP DHBT Technology. , 2018, , .		9
34	A Hetero-Integrated W-Band Transmitter Module in InP-on-BiCMOS Technology. , 2018, , .		3
35	220â€"325ÂGHz highâ€isolation SPDT switch in InP DHBT technology. Electronics Letters, 2018, 54, 1222-1224.	0.5	10
36	A Highly Efficient Ultrawideband Traveling-Wave Amplifier in InP DHBT Technology. IEEE Microwave and Wireless Components Letters, 2018, 28, 1029-1031.	2.0	16

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37	Millimeter-wave Signal Generation and Detection via the same Triple Barrier RTD and on-chip Antenna. , 2018, , .		7
38	Transferred-Substrate InP/GaAsSb Heterojunction Bipolar Transistor Technology With <inline-formula> <tex-math notation="LaTeX">${f}_{ext{max}}$ </tex-math> </inline-formula> ~ 0.53 THz. IEEE Transactions on Electron Devices, 2018, 65, 3704-3710.	1.6	17
39	A 95 GHz bandwidth 12 dBm output power distributed amplifier in InP-DHBT technology for optoelectronic applications. , 2018, , .		2
40	EM simulation assisted parameter extraction for transferred-substrate InP HBT modeling. International Journal of Microwave and Wireless Technologies, 2018, 10, 700-708.	1.5	12
41	Flip-Chip Approach for 500 GHz Broadband Interconnects. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 1215-1225.	2.9	18
42	Manufacturable Low-Cost Flip-Chip Mounting Technology for 300â€“500-GHz Assemblies. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 494-501.	1.4	12
43	Tight Focus Toward the Future: Tight Material Combination for Millimeter-Wave RF Power Applications: InP HBT SiGe BiCMOS Heterogeneous Wafer-Level Integration. IEEE Microwave Magazine, 2017, 18, 74-82.	0.7	17
44	An efficient W-band InP DHBT digital power amplifier. International Journal of Microwave and Wireless Technologies, 2017, 9, 1241-1249.	1.5	2
45	Performance study of a 248 GHz voltage controlled hetero-integrated source in InP-on-BiCMOS technology. International Journal of Microwave and Wireless Technologies, 2017, 9, 259-268.	1.5	3
46	An active balanced up-converter module in InP-on-BiCMOS technology. , 2017, , .		5
47	Noise modeling of transferred-substrate InP-DHBTs. , 2017, , .		2
48	EM simulation assisted parameter extraction for the modeling of transferred-substrate InP HBTs. , 2017, , .		7
49	An efficient W-band InP DHBT digital power amplifier. , 2016, , .		2
50	Balanced G-band Gm-boosted frequency doublers in transferred substrate InP HBT technology. , 2016, , .		1
51	A 315 GHz reflection-type push-push oscillator in InP-DHBT technology. , 2016, , .		5
52	A 100 GHz fundamental oscillator with 25% efficiency based on transferred-substrate InP-DHBT technology. , 2016, , .		0
53	Multifinger Indium Phosphide Double-Heterostructure Transistor Circuit Technology With Integrated Diamond Heat Sink Layer. IEEE Transactions on Electron Devices, 2016, 63, 1846-1852.	1.6	15
54	Benzocyclobutene dry etch with minimized byproduct redeposition for application in an InP DHBT process. Microelectronic Engineering, 2016, 161, 63-68.	1.1	7

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55	A 200 mW InP DHBT W-band power amplifier in transferred-substrate technology with integrated diamond heat spreader. , 2016, , .		3
56	A 330 GHz active frequency quadrupler in InP DHBT transferred-substrate technology. , 2016, , .		8
57	SciFab -a wafer-level heterointegrated InP DHBT/SiGe BiCMOS foundry process for mm-wave applications. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 909-916.	0.8	36
58	A G-Band High Power Frequency Doubler in Transferred-Substrate InP HBT Technology. IEEE Microwave and Wireless Components Letters, 2016, 26, 49-51.	2.0	13
59	A 250 GHz hetero-integrated VCO with 0.7 mW output power in InP-on-BiCMOS technology. , 2015, , .		1
60	Improved thermal management of InP transistors in transferredâ€substrate technology with diamond heatâ€spreading layer. Electronics Letters, 2015, 51, 1010-1012.	0.5	23
61	G-band frequency doubler based on InP transferred-substrate technology. , 2015, , .		1
62	An efficient 290 GHz harmonic oscillator in transferred-substrate InP-DHBT technology. , 2015, , .		1
63	Flip-Chip Interconnects for 250 GHz Modules. IEEE Microwave and Wireless Components Letters, 2015, 25, 358-360.	2.0	20
64	A 330 GHz hetero-integrated source in InP-on-BiCMOS technology. , 2015, , .		9
65	Silicon nitride stop layer in back-end-of-line planarization for wafer bonding application. , 2014, , .		4
66	Small- and large-signal modeling of InP HBTs in transferred-substrate technology. International Journal of Microwave and Wireless Technologies, 2014, 6, 243-251.	1.5	10
67	A 270 GHz push-push oscillator in InP-DHBT-on-BiCMOS technology. , 2014, , .		4
68	(Invited) Combining SiGe BiCMOS and InP Processing in an on-top of Chip Integration Approach. ECS Transactions, 2014, 64, 177-194.	0.3	8
69	On-wafer small-signal and large-signal measurements up to sub-THz frequencies. , 2014, , .		12
70	Three-dimensional InP-DHBT on SiGe-BiCMOS integration by means of Benzocyclobutene based wafer bonding for MM-wave circuits. Microelectronic Engineering, 2014, 125, 38-44.	1.1	8
71	InP on BiCMOS technology platform for millimeter-wave and THz MMIC. , 2013, , .		3
72	Monolithic InP Dual-Polarization and Dual-Quadrature Coherent Receiver. IEEE Photonics Technology Letters, 2011, 23, 694-696.	1.3	38

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73	Manufacturable Monolithically Integrated InP Dual-Port Coherent Receiver for 100G PDM-QPSK Applications. , 2011, , .		12
74	Efficient Membrane Grating Couplers on InP. IEEE Photonics Technology Letters, 2010, 22, 890-892.	1.3	17
75	InP DHBT circuits: From device physics to 40Gb/s and 100Gb/s transmission system experiments. Bell Labs Technical Journal, 2009, 14, 43-62.	0.7	4
76	InP DHBT circuits for 100 Gb/s Ethernet applications. , 2008, , .		7
77	Integrated photonic digital-to-analog converter for arbitrary waveform generation. , 2008, , .		2
78	In[sub 0.68]Ga[sub 0.32]Asâˆ•Al[sub 0.64]In[sub 0.36]Asâˆ•InP 4.5â€‚Î¼m quantum cascade lasers grown by solid phosphorus molecular beam epitaxy. Journal of Vacuum Science & Technology B, 2007, 25, 913.	1.3	1
79	Highly Efficient Harmonically Tuned InP D-HBT Push-Push Oscillators Operating up to 287 GHz. , 2007, , .		23
80	High-Speed Low-Loss Schottky-i-n InP-Based Optical Modulator for RF Photonics. IEEE Photonics Technology Letters, 2007, 19, 270-272.	1.3	7
81	Fully dry-etched InP Double-Hetero Bipolar Transistors with ft > 400 GHz. , 2006, , .		2
82	InP double-hetero bipolar transistor technology for 130 GHz clock speed. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 452-455.	0.8	8
83	Recent Advances in III-V Electronics. , 2006, , .		0
84	High-reflectivity ultraviolet AlGaNâˆ•AlGaN distributed Bragg reflectors. Applied Physics Letters, 2006, 88, 171101.	1.5	35
85	Submicron InP D-HBT single-stage distributed amplifier with 17 dB gain and over 110 GHz bandwidth. , 2006, , .		20
86	Surface roughness in sulfur ion-implanted InP with molecular beam epitaxy regrown double-heterojunction bipolar transistor layers. Applied Physics Letters, 2005, 86, 143508.	1.5	2
87	High-power submicron InP D-HBT push-push oscillators operating up to 215 GHz. , 2005, , .		12
88	Smooth and vertical-sidewall InP etching using Cl[sub 2]/N[sub 2] inductively coupled plasma. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 510.	1.6	28
89	Self-Heating of Submicrometer InPâ€“InGaAs DHBTs. IEEE Electron Device Letters, 2004, 25, 357-359.	2.2	10
90	High gain-bandwidth differential distributed InP D-HBT driver amplifiers with large (11.3 V/sub pp/) output swing at 40 Gb/s. IEEE Journal of Solid-State Circuits, 2004, 39, 1697-1705.	3.5	24

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91	An InGaAs-InP HBT differential transimpedance amplifier with 47-GHz bandwidth. IEEE Journal of Solid-State Circuits, 2004, 39, 1720-1723.	3.5	47
92	High power GaN/AlGaN/GaN HEMTs operating at 2 to 25 GHz grown by plasma-assisted MBE. Physica Status Solidi A, 2003, 200, 175-178.	1.7	5
93	SiGe differential transimpedance amplifier with 50-GHz bandwidth. IEEE Journal of Solid-State Circuits, 2003, 38, 1512-1517.	3.5	64
94	Unpassivated AlGaN-GaN HEMTs with minimal RF dispersion grown by plasma-assisted MBE on semi-insulating 6H-SiC substrates. IEEE Electron Device Letters, 2003, 24, 57-59.	2.2	36
95	Impact of Si doping on radio frequency dispersion in unpassivated GaN/AlGaN/GaN high-electron-mobility transistors grown by plasma-assisted molecular-beam epitaxy. Applied Physics Letters, 2003, 82, 4361-4363.	1.5	57
96	A high-gain InP D-HBT driver amplifier with 50 GHz bandwidth and 10 Vpp differential output swing at 40 Gb/s. , 2003, , .		3
97	Electron Field Emission from GaN Nanotip Pyramids. Materials Research Society Symposia Proceedings, 2003, 798, 407.	0.1	0
98	Second-harmonic generation in periodically poled GaN. Applied Physics Letters, 2003, 83, 1077-1079.	1.5	154
99	GaN nanotip pyramids formed by anisotropic etching. Journal of Applied Physics, 2003, 94, 650-653.	1.1	163
100	Effect of dislocations on local transconductance in AlGaN/GaN heterostructures as imaged by scanning gate microscopy. Applied Physics Letters, 2003, 83, 4559-4561.	1.5	8
101	Patterning GaN Microstructures by Polarity-Selective Chemical Etching. Japanese Journal of Applied Physics, 2003, 42, L1405-L1407.	0.8	46
102	Unpassivated AlGaNâˆ•GaN HEMTs with CW power density of 3.2â€…Wâˆ•mm at 25â€…GHz grown by plasma-assisted MBE. Electronics Letters, 2003, 39, 694.	0.5	24
103	Dislocation and morphology control during molecular-beam epitaxy of AlGaN/GaN heterostructures directly on sapphire substrates. Applied Physics Letters, 2002, 81, 1456-1458.	1.5	35
104	High mobility AlGaN/GaN heterostructures grown by plasma-assisted molecular beam epitaxy on semi-insulating GaN templates prepared by hydride vapor phase epitaxy. Journal of Applied Physics, 2002, 92, 338-345.	1.1	73
105	Thin-film resistor fabrication for InP technology applications. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 871.	1.6	9
106	Submicron AlGaN/GaN HEMTs with very high drain current density grown by plasma-assisted MBE on 6H-SiC. IEEE Electron Device Letters, 2002, 23, 691-693.	2.2	11
107	Prime Quasientropy and Quasichaos. International Journal of Theoretical Physics, 2002, 41, 1389-1395.	0.5	1
108	Undoped AlGaN/GaN HEMTs for microwave power amplification. IEEE Transactions on Electron Devices, 2001, 48, 479-485.	1.6	347

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109	Compact InP-based HBT VCOs with a wide tuning range at W- and D-band. IEEE Transactions on Microwave Theory and Techniques, 2000, 48, 2403-2408.	2.9	47
110	Two dimensional electron gases induced by spontaneous and piezoelectric polarization in undoped and doped AlGaN/GaN heterostructures. Journal of Applied Physics, 2000, 87, 334-344.	1.1	1,373
111	AlGaN/GaN heterostructures on insulating AlGaN nucleation layers. Applied Physics Letters, 1999, 75, 388-390.	1.5	78
112	Role of Spontaneous and Piezoelectric Polarization Induced Effects in Group-III Nitride Based Heterostructures and Devices. Physica Status Solidi (B): Basic Research, 1999, 216, 381-389.	0.7	109
113	Two-dimensional electron gases induced by spontaneous and piezoelectric polarization charges in N- and Ga-face AlGaN/GaN heterostructures. Journal of Applied Physics, 1999, 85, 3222-3233.	1.1	2,482
114	Scattering of electrons at threading dislocations in GaN. Journal of Applied Physics, 1998, 83, 3656-3659.	1.1	578
115	The role of dislocation scattering in n-type GaN films. Applied Physics Letters, 1998, 73, 821-823.	1.5	407
116	Scattering of electrons at threading dislocations in GaN and consequences for current transport in vertical devices. , 1997, , .		1
117	Design, fabrication and characterization of GaN-based HFET's. , 0, , .		1
118	Power limits of polarization-induced AlGaN/GaN HEMT's. , 0, , .		1
119	AlGaN/GaN HEMTs grown by molecular beam epitaxy on sapphire, SiC, and HVPE GaN templates. , 0, , .		7
120	AlGaN/GaN HEMTs grown by MBE on semi-insulating HVPE GaN templates. , 0, , .		2
121	Comparison of high mobility AlGaN/GaN heterostructures grown by MBE on HVPE GaN templates and directly nucleated on sapphire. , 0, , .		0
122	Towards planar processing for InP DHBTs. , 0, , .		3
123	High power AlGaN/GaN HEMTs grown by plasma-assisted MBE operating at 2 to 25 GHz. , 0, , .		0
124	Numerical investigation of the effect of doping profiles on the high frequency performance of InP/InGaAs super scaled HBTs. , 0, , .		0
125	High Speed Integrated InP Photonic Digital-to-Analog Converter. , 0, , .		8
126	High Gain-Bandwidth InP waveguide Phototransistor. , 0, , .		1