

Guillaume Ducournau

List of Publications by Year in descending order

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79
papers

3,056
citations

236925

25
h-index

161849

54
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82
all docs

82
docs citations

82
times ranked

2828
citing authors

#	ARTICLE	IF	CITATIONS
1	Advances in terahertz communications accelerated by photonics. <i>Nature Photonics</i> , 2016, 10, 371-379.	31.4	1,284
2	Ultrahigh sensitive sub-terahertz detection by InP-based asymmetric dual-grating-gate high-electron-mobility transistors and their broadband characteristics. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	158
3	Ultrawide-Bandwidth Single-Channel 0.4-THz Wireless Link Combining Broadband Quasi-Optic Photomixer and Coherent Detection. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2014, 4, 328-337.	3.1	115
4	Analogue switches made from boron nitride monolayers for application in 5G and terahertz communication systems. <i>Nature Electronics</i> , 2020, 3, 479-485.	26.0	86
5	Coherent THz communication at 200 GHz using a frequency comb, UTC-PD and electronic detection. <i>Electronics Letters</i> , 2014, 50, 386-388.	1.0	73
6	A Terahertz Wireless Communication Link Using a Superheterodyne Approach. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2020, 10, 32-43.	3.1	70
7	THz Communications using Photonics and Electronic Devices: the Race to Data-Rate. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2015, 36, 198-220.	2.2	69
8	Single-channel 100 Gbit/s transmission using UTC-PDs for future IEEE 802.15.3d wireless links in the 300 GHz band. <i>Electronics Letters</i> , 2018, 54, 638-640.	1.0	60
9	Milliwatt-level output power in the sub-terahertz range generated by photomixing in a GaAs photoconductor. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	57
10	Searching for THz Gunn oscillations in GaN planar nanodiodes. <i>Journal of Applied Physics</i> , 2012, 111, .	2.5	48
11	Active Ultrahigh-Q (0.2 Å– 10 ⁶) THz Topological Cavities on a Chip. <i>Advanced Materials</i> , 2022, 34, e2202370.	21.0	48
12	High-efficiency uni-travelling-carrier photomixer at 1.55 μm and spectroscopy application up to 1.4 THz. <i>Electronics Letters</i> , 2008, 44, 1320.	1.0	43
13	Highly coherent terahertz wave generation with a dual-frequency Brillouin fiber laser and a 155 μm photomixer. <i>Optics Letters</i> , 2011, 36, 2044.	3.3	42
14	Thin-film transmission lines using cyclic olefin copolymer for millimetre-wave and terahertz integrated circuits. <i>Electronics Letters</i> , 2011, 47, 453.	1.0	42
15	Terahertz detection in zero-bias InAs self-switching diodes at room temperature. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	41
16	32 Gbit/s QPSK transmission at 385 GHz using coherent fibre-optic technologies and THz double heterodyne detection. <i>Electronics Letters</i> , 2015, 51, 915-917.	1.0	41
17	CW Source Based on Photomixing With Output Power Reaching 1.8 mW at 250 GHz. <i>IEEE Electron Device Letters</i> , 2013, 34, 1277-1279.	3.9	38
18	Kapton-derived carbon as efficient terahertz absorbers. <i>Carbon</i> , 2016, 100, 158-164.	10.3	35

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19	Generation of mW Level in the 300-GHz Band Using Resonant-Cavity-Enhanced Unitraveling Carrier Photodiodes. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 800-807.	3.1	35
20	Optically power supplied Gbit/s wireless hotspot using 1.55- μ m THz photomixer and heterodyne detection at 200-GHz. Electronics Letters, 2010, 46, 1349.	1.0	33
21	Terahertz Band Communications With Topological Valley Photonic Crystal Waveguide. Journal of Lightwave Technology, 2021, 39, 7609-7620.	4.6	32
22	Monolayer molybdenum disulfide switches for 6G communication systems. Nature Electronics, 2022, 5, 367-373.	26.0	31
23	Recent Developments of an Opto-Electronic THz Spectrometer for High-Resolution Spectroscopy. Sensors, 2009, 9, 9039-9057.	3.8	29
24	10-Gb/s Indoor THz Communications Using Industrial Si Photonics Technology. IEEE Microwave and Wireless Components Letters, 2018, 28, 362-364.	3.2	27
25	A 300-GHz Wireless Link Employing a Photonic Transmitter and an Active Electronic Receiver With a Transmission Bandwidth of 54-GHz. IEEE Transactions on Terahertz Science and Technology, 2020, 10, 271-281.	3.1	26
26	Silicon photonics targets terahertz region. Nature Photonics, 2018, 12, 574-575.	31.4	25
27	Terahertz wireless communication using GaAs transistors as detectors. Electronics Letters, 2014, 50, 323-325.	1.0	24
28	High-Gain Yagi-Uda Antenna on Cyclic Olefin Copolymer Substrate for 300-GHz Applications. IEEE Antennas and Wireless Propagation Letters, 2014, 13, 939-942.	4.0	23
29	Mode-hopping suppression in long Brillouin fiber laser with non-resonant pumping. Optics Letters, 2016, 41, 2362.	3.3	23
30	Optimization and small-signal modeling of zero-bias InAs self-switching diode detectors. Solid-State Electronics, 2015, 104, 79-85.	1.4	21
31	Millimeter-Wave Noise Source Development on SiGe BiCMOS 55-nm Technology for Applications up to 260 GHz. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 3732-3742.	4.6	20
32	High-Q THz Photonic Crystal Cavity on a Low-Loss Suspended Silicon Platform. IEEE Transactions on Terahertz Science and Technology, 2021, 11, 42-53.	3.1	20
33	High-definition television transmission at 600-GHz combining THz photonics hotspot and high-sensitivity heterodyne receiver. Electronics Letters, 2014, 50, 413-415.	1.0	19
34	Narrow Linewidth Tunable Terahertz Radiation By Photomixing Without Servo-Locking. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 260-266.	3.1	18
35	Modeling and Analysis of a Broadband Schottky Diode Noise Source Up To 325 GHz Based on 55-nm SiGe BiCMOS Technology. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 2268-2277.	4.6	18
36	Analysis of a narrowband terahertz signal generated by a unitravelling carrier photodiode coupled with a dual-mode semiconductor Fabry-Pérot laser. Applied Physics Letters, 2010, 96, 241106.	3.3	17

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37	High Performance Heterostructure Low Barrier Diodes for Sub-THz Detection. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 780-788.	3.1	17
38	Nonlinear nanochannels for room temperature terahertz heterodyne detection. Semiconductor Science and Technology, 2013, 28, 125024.	2.0	15
39	Radiative Quality Factor in Thin Resonant Metamaterial Absorbers. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 1764-1772.	4.6	14
40	Highly efficient terahertz detection by optical mixing in a GaAs photoconductor. Applied Physics Letters, 2013, 103, .	3.3	13
41	Operation of GaN Planar Nanodiodes as THz Detectors and Mixers. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 670-677.	3.1	13
42	A superheterodyne 300 GHz wireless link for ultra-fast terahertz communication systems. International Journal of Microwave and Wireless Technologies, 2020, 12, 578-587.	1.9	13
43	Photonics-Based Near-Field Measurement and Far-Field Characterization for 300-GHz Band Antenna Testing. IEEE Open Journal of Antennas and Propagation, 2022, 3, 24-31.	3.7	13
44	Metasurface-Based Filters for High Data Rate THz Wireless Communication: Experimental Validation of a 14 Gbps OOK and 104 Gbps QAM-16 Wireless Link in the 300 GHz Band. IEEE Transactions on Wireless Communications, 2022, 21, 8688-8697.	9.2	13
45	Freehand System for Antenna Diagnosis Based on Amplitude-Only Data. IEEE Transactions on Antennas and Propagation, 2021, 69, 4988-4998.	5.1	12
46	Heterogeneously integrated III-V/silicon dual-mode distributed feedback laser array for terahertz generation. Optics Letters, 2014, 39, 6403.	3.3	11
47	Net-shaped pyramidal carbon-based ceramic materials designed for terahertz absorbers. Materials and Design, 2017, 120, 1-9.	7.0	11
48	High-Pass Sub-mmWave Filtering by Woven Textile Metamaterials. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 427-433.	3.1	11
49	Coherent Wireless Link at 300 GHz With 160 Gbit/s Enabled by a Photonic Transmitter. Journal of Lightwave Technology, 2022, 40, 4178-4185.	4.6	10
50	Free-Space Characterization of Magneto-Optical Hexaferrites in the Submillimeter-Wave Range. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 563-571.	3.1	8
51	300-GHz Intermodulation/Noise Characterization Enabled by a Single THz Photonics Source. IEEE Microwave and Wireless Components Letters, 2020, 30, 1013-1016.	3.2	8
52	Rapid prototyping of flexible terahertz metasurfaces using a microplotter. Optics Express, 2021, 29, 8617.	3.4	8
53	Sub-THz characterisation of multi-walled carbon nanotube thin films using vector network analyser. Electronics Letters, 2014, 50, 297-299.	1.0	7
54	Indoor 100 Gbit/s THz data link in the 300 GHz band using fast photodiodes. , 2018, , .		7

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55	300 GHz quadrature phase shift keying and QAM16 56 Gbps wireless data links using silicon photonics photodiodes. Electronics Letters, 2019, 55, 808-810.	1.0	7
56	Monte Carlo study of the operation of GaN planar nanodiodes as sub-THz emitters in resonant circuits. Semiconductor Science and Technology, 2014, 29, 115032.	2.0	6
57	Subsampling of RF and THz waves using LT-GaAs photoconductors under 1550 nm light excitation. Electronics Letters, 2017, 53, 1596-1598.	1.0	5
58	Optical properties of carbon nanotube thin films in subterahertz frequency regime. Microwave and Optical Technology Letters, 2014, 56, 1895-1898.	1.4	4
59	A 130 to 170 GHz integrated noise source based on avalanche silicon Schottky diode in BiCMOS 55 nm for in-situ noise characterization. , 2017, , .		4
60	A 140 GHz to 160 GHz active impedance tuner for in-situ noise characterization in BiCMOS 55 nm. , 2017, , .		4
61	InAlAs/InGaAs-MSM photodetectors based on optical cavity using metallic mirrors: THz frequency operation, high quantum efficiency and high saturation current. Applied Physics Letters, 2019, 114, .	3.3	4
62	Short Bends using Curved Mirrors in Silicon Waveguides for Terahertz Waves. Optics Express, 2022, 30, 6656-6670.	3.4	4
63	Microwave and Millimeter Wave Properties of Vertically-Aligned Single Wall Carbon Nanotubes Films. Journal of Electronic Materials, 2016, 45, 2433-2441.	2.2	3
64	T-ray modulation of light for future THz radios. Nature Photonics, 2019, 13, 511-513.	31.4	3
65	On Wafer Millimetre Wave Power Detection Using a PN Junction Diode in BiCMOS 55 nm for In-Situ Large Signal Characterization. , 2018, , .		2
66	Silicon Based Diode Noise Source Scaling For Noise Measurement Up To 325 GHz. , 2019, , .		2
67	Coplanar waveguides on BCB measured up to 760 GHz. Journal of Electromagnetic Waves and Applications, 2021, 35, 2051-2061.	1.6	2
68	Photonics-Based Transmitters and Receivers. Springer Series in Optical Sciences, 2022, , 299-314.	0.7	2
69	A 140 GHz to 170 GHz Active Tunable Noise Source Development in SiGe BiCMOS 55 nm Technology. , 2022, , .		2
70	High-Directivity Terahertz Silicon-Lens TEM Horn Antenna. , 2018, , .		1
71	SiGe Based LNA for Data Communication Applications at 211 GHz. , 2021, , .		1
72	50-Gbit/s Terahertz Communication using a Valley Photonic Crystal Waveguide. , 2020, , .		1

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73	SOI-based micro-mechanical terahertz detector operating at room-temperature and atmospheric pressure. Applied Physics Letters, 2022, 120, 261103.	3.3	1
74	Position effect of split ring resonators along terahertz planar Goubau line. , 2014, , .		0
75	Free space material characterization of carbon nanotube thin films at sub-terahertz frequencies. Journal of Electromagnetic Waves and Applications, 2016, 30, 589-598.	1.6	0
76	Nano-structured top contact with low optical polarization dependence for THz generation using photodiodes. , 2018, , .		0
77	300 GHz-band 50 Gbit/s dual channel link using industrial silicon photonics technology. , 2019, , .		0
78	H2S photoacoustic detection with an integrated THz gas sensor for food quality control. , 2021, , .		0
79	High Q factor and high transmittance suspended membrane THz PhC cavity: experimental demonstration for sensing applications. , 2020, , .		0