

# Dmytro B But

## List of Publications by Year in descending order

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90  
papers

829  
citations

567281

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501196

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91  
all docs

91  
docs citations

91  
times ranked

797  
citing authors

#	ARTICLE	IF	CITATIONS
1	Terahertz Detection and Imaging Using Graphene Ballistic Rectifiers. Nano Letters, 2017, 17, 7015-7020.	9.1	100
2	Temperature-driven massless Kane fermions in HgCdTe crystals. Nature Communications, 2016, 7, 12576.	12.8	73
3	Pressure- and temperature-driven phase transitions in HgTe quantum wells. Physical Review B, 2016, 94, .	3.2	57
4	Sensitivity of Field-Effect Transistor-Based Terahertz Detectors. Sensors, 2021, 21, 2909.	3.8	54
5	HgCdTe-based heterostructures for terahertz photonics. APL Materials, 2017, 5, .	5.1	49
6	Room-Temperature Amplification of Terahertz Radiation by Grating-Gate Graphene Structures. Physical Review X, 2020, 10, .	8.9	43
7	Temperature-driven single-valley Dirac fermions in HgTe quantum wells. Physical Review B, 2017, 96, .	3.2	38
8	Nonlinear photoresponse of field effect transistors terahertz detectors at high irradiation intensities. Journal of Applied Physics, 2014, 115, .	2.5	36
9	Temperature enhancement of terahertz responsivity of plasma field effect transistors. Journal of Applied Physics, 2012, 112, .	2.5	32
10	Low frequency noise and trap density in GaN/AlGaN field effect transistors. Applied Physics Letters, 2019, 115, .	3.3	27
11	Suppressed Auger scattering and tunable light emission of Landau-quantized massless Kane electrons. Nature Photonics, 2019, 13, 783-787.	31.4	23
12	Terahertz 3D printed diffractive lens matrices for field-effect transistor detector focal plane arrays. Optics Express, 2016, 24, 20119.	3.4	22
13	Symmetry breaking and circular photogalvanic effect in epitaxial $\text{CdTe}/\text{GaAs}$ quantum well films. Physical Review Materials, 2020, 4, .		
14	Two-dimensional plasmons in lateral carbon nanotube network structures and their effect on the terahertz radiation detection. Journal of Applied Physics, 2016, 120, 044501.	2.5	18
15	Magneto-transport in inverted HgTe quantum wells. Npj Quantum Materials, 2019, 4, .	5.2	16
16	AlGaN/GaN field effect transistor with two lateral Schottky barrier gates towards resonant detection in sub-mm range. Semiconductor Science and Technology, 2019, 34, 024002.	2.0	15
17	Saturation of photoresponse to intense THz radiation in AlGaN/GaN HEMT detector. Journal of Applied Physics, 2016, 120, 164507.	2.5	14
18	All-Electronic Emitter-Detector Pairs for 250 GHz in Silicon. Sensors, 2021, 21, 5795.	3.8	14

#	ARTICLE	IF	CITATIONS
19	High-Speed Room Temperature Terahertz Detectors Based on InP Double Heterojunction Bipolar Transistors. International Journal of High Speed Electronics and Systems, 2016, 25, 1640011.	0.7	13
20	Terahertz imaging of Landau levels in HgTe-based topological insulators. Applied Physics Letters, 2016, 108, .	3.3	13
21	Graphene as a Schottky Barrier Contact to AlGaIn/GaN Heterostructures. Materials, 2020, 13, 4140.	2.9	13
22	THz Beam Shaper Realizing Fan-Out Patterns. Journal of Infrared, Millimeter, and Terahertz Waves, 2017, 38, 1019-1030.	2.2	11
23	Time Resolution and Dynamic Range of Field-Effect Transistor-Based Terahertz Detectors. Journal of Infrared, Millimeter, and Terahertz Waves, 2019, 40, 703-719.	2.2	11
24	Homodyne Spectroscopy with Broadband Terahertz Power Detector Based on 90-nm Silicon CMOS Transistor. Applied Sciences (Switzerland), 2021, 11, 412.	2.5	11
25	Sub-THz radiation room temperature sensitivity of long-channel silicon field effect transistors. Opto-electronics Review, 2012, 20, .	2.4	10
26	AlGaIn/GaN HEMT's photoresponse to high intensity THz radiation. Opto-electronics Review, 2015, 23, .	2.4	8
27	Terahertz vision using field effect transistors detectors arrays. , 2018, , .		7
28	Performance evaluation of active sub-Terahertz systems in Degraded Visual Environments (DVE). Proceedings of SPIE, 2016, , .	0.8	6
29	Effect of ultraviolet light on 1/f noise in carbon nanotube networks. Materials Research Bulletin, 2021, 134, 111093.	5.2	6
30	The dynamic range of THz broadband FET detectors. , 2013, , .		5
31	Terahertz imaging with GaAs and GaN plasma field effect transistors detectors. , 2016, , .		4
32	Silicon based resonant power detector for 620 GHz. , 2020, , .		4
33	Terahertz Plasma Field Effect Transistors. Springer Series in Optical Sciences, 2014, , 77-100.	0.7	4
34	Nonlinear photoresponse of FET THz broadband detectors at high power irradiation. , 2013, , .		3
35	Imaging and Gas Spectroscopy for Health Protection in Sub-THz Frequency Range. International Journal of High Speed Electronics and Systems, 2016, 25, 1640017.	0.7	3
36	Lateral Schottky barrier diodes based on GaN/AlGaIn 2DEG for sub-THz detection. , 2016, , .		3

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37	Millimeter and submillimeter range detector based on graphene ballistic rectifiers. , 2018, , .		3
38	Electrical and Noise Characteristics of Fin-Shaped GaN/AlGa <sub>N</sub> Devices for High Frequency Operation. , 2019, , .		3
39	Enhanced Sub-wavelength Focusing by Double-Sided Lens with Phase Correction in THz Range. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 685-696.	2.2	3
40	Terahertz detection and emission by field-effect transistors. , 2012, , .		2
41	Silicon field-effect transistors as radiation detectors for the Sub-THz range. Semiconductors, 2012, 46, 678-683.	0.5	2
42	Nanotransistor based THz plasma detectors: low temperatures, graphene, linearity, and circular polarization studies. , 2013, , .		2
43	GaN/AlGa <sub>N</sub> based transistors for terahertz emitters and detectors. , 2016, , .		2
44	Terahertz imaging with arrays of plasma field effect transistors detectors. , 2016, , .		2
45	Asymmetric devices based on carbon nanotubes as detectors of sub-THz radiation. Journal of Physics: Conference Series, 2016, 741, 012143.	0.4	2
46	Millimetre band detectors based on GaN/AlGa <sub>N</sub> HEMT. , 2018, , .		2
47	AlGa <sub>N</sub> /GaN HEMTs for THz Plasma Wave Detection and Emission. , 2020, , .		2
48	Terahertz Detectors Based on Silicon Technology Field Effect Transistors. Materials Research Society Symposia Proceedings, 2012, 1437, 48.	0.1	1
49	Signal-to-noise ratio in terahertz wireless communication using field-effect-transistors as detectors. , 2013, , .		1
50	Experimental and theoretical investigations of the responsivity of field effect transistors based Terahertz detectors versus substrate thickness. , 2015, , .		1
51	A 220 V/W, 25 pW/â€šHz NEP bow-tie antenna-coupled pHEMT detector at 250 GHz. , 2016, , .		1
52	Substrate optimization for a planar antenna of terahertz Si field effect transistor detectors. , 2016, , .		1
53	Terahertz detection by AlGa <sub>N</sub> /GaN HEMTs at high intensity. , 2016, , .		1
54	Diffraction optics for GaN terahertz detectors arrays. , 2016, , .		1

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55	Detection of high intensity THz radiation by InP double heterojunction bipolar transistors. , 2017, , .		1
56	Reducing noise equivalent power in InP DHBT terahertz detector by biasing the collector. , 2017, , .		1
57	Field Effect Transistors Based Terahertz Detectors 25 Years History, State of the Art and Future Directions. , 2018, , .		1
58	AlGaN/GaN Field Effect Transistors Based on Lateral Schottky Barrier Gates as Millimeter Wave Detectors. , 2018, , .		1
59	Graphene ballistic rectifiers for THz detection and imaging. , 2018, , .		1
60	Terahertz Digital Holography Using Field-Effect Transistor Detectors. , 2019, , .		1
61	Double-Quantum-Well AlGaN/GaN Field Effect Transistors with Top and Back Gates: Electrical and Noise Characteristics. Micromachines, 2021, 12, 721.	2.9	1
62	Terahertz Response of a Point Contact Based on CdTe/CdMgTe Quantum Well in Magnetic Field. Acta Physica Polonica A, 2012, 122, 1069-1072.	0.5	1
63	Magnetoconductivity of a Mercury Cadmium Telluride Resonant THz Detector. Acta Physica Polonica A, 2018, 134, 973-977.	0.5	1
64	Characterization of Silver Nanowire Layers in the Terahertz Frequency Range. Materials, 2021, 14, 7399.	2.9	1
65	Terahertz rectification by graphene field effect transistors. , 2012, , .		0
66	Plasma nonlinearities and terahertz detection by Field Effect Transistors. , 2012, , .		0
67	Terahertz radiation detection by double grating-gate transistors in high magnetic fields. , 2012, , .		0
68	Field effect transistor as detector of THz radiation helicity. , 2013, , .		0
69	Temperature, back gate and polarization studies in nanotransistor based THz plasma detectors. , 2013, , .		0
70	Magnetspectroscopy of HgTe based topological insulators. , 2013, , .		0
71	Contribution of the gate leakage current to terahertz detection by asymmetric dual-grating gate HEMT structures. , 2013, , .		0
72	A Terahertz plasma oscillations in nanometer field effect transistors for Terahertz radiation rectification. , 2013, , .		0

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73	Application of plasma-wave detectors for ultra-short pulse terahertz radiation. , 2014, , .		0
74	Detection of high intensity thz radiation by field effect transistors. , 2014, , .		0
75	Terahertz cyclotron emission from HgCdTe bulk films. , 2016, , .		0
76	THz magnetospectroscopy of double HgTe quantum well. , 2016, , .		0
77	GaN/AlGaN lateral Schottky barrier diodes for high frequency applications. , 2016, , .		0
78	Terahertz imaging by field effect transistors. , 2016, , .		0
79	Time Resolution and Power Dependence of Transistor Based Terahertz Detectors. , 2019, , .		0
80	AlGaIn/GaN heterostructures for plasma wave detection and emission in THz regime. , 2021, , .		0
81	Modified bow-tie antennas AlGaIn/GaN FinFETs for sub-THz detection. , 2021, , .		0
82	Terahertz magnetospectroscopy of pseudo-relativistic fermions in HgCdTe alloys under hydrostatic pressure. , 2021, , .		0
83	Review of methods for performance evaluation of antenna-coupled THz detectors. , 2021, , .		0
84	252-GHz Compact All-Electronic CMOS Optopair with SNR of 62 dB. , 2021, , .		0
85	THz Double-Grating Gate Transistor Detectors in High Magnetic Fields. Acta Physica Polonica A, 2012, 122, 1080-1082.	0.5	0
86	Imaging and Gas Spectroscopy for Health Protection in Sub-THz Frequency Range. , 2017, , .		0
87	Noise limitations of GaN lateral Schottky diodes for THz applications. , 2017, , .		0
88	Features of the Formation of Ohmic Contacts to n+-InN. Ukrainian Journal of Physics, 2019, 64, 56.	0.2	0
89	Sub-terahertz detection by fin-shaped GaN/AlGaIn transistors. , 2020, , .		0
90	Anomalous sub-THz detection by GaN/AlGaIn FinFETs. , 2020, , .		0