Dmitry Ponomarev

List of Publications by Year
in descending order

75	1,113	430874 18	477307 29
papers	citations	h-index	g-index

76	76	76	521
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Recent advances in THz detectors based on semiconductor structures with quantum confinement: a review. Journal Physics D: Applied Physics, 2022, 55, 193001.	2.8	8
2	Continuously tunable middle-IR bandpass filters based on gradient metal-hole arrays for multispectral sensing and thermography. Journal of Applied Physics, 2022, 131, .	2.5	2
3	Boosting photoconductive large-area THz emitter via optical light confinement behind a highly refractive sapphire-fiber lens. Optics Letters, 2022, 47, 1899.	3.3	9
4	Terahertz solid immersion microscopy: Recent achievements and challenges. Applied Physics Letters, 2022, 120, .	3.3	17
5	3.3 THz Quantum Cascade Laser Based on a Three GaAs/AlGaAs Quantum-Well Active Module with an Operating Temperature above 120 K. Semiconductors, 2022, 56, 71-77.	0.5	1
6	Object-dependent spatial resolution of the reflection-mode terahertz solid immersion microscopy. Optics Express, 2021, 29, 3553.	3.4	20
7	Optical light confinement in terahertz antennas. AIP Conference Proceedings, 2021, , .	0.4	0
8	Limiting factors to the performance and operation frequency range of THz quantum cascade laser based on GaAs/AlGaAs heterostructures. AIP Conference Proceedings, 2021, , .	0.4	0
9	Experimental verification of a plasmonic hook in a dielectric Janus particle. Applied Physics Letters, 2021, 118, 131107.	3.3	12
10	Efficient optical-to-terahertz conversion in large-area InGaAs photo-Dember emitters with increased indium content. Optics Letters, 2021, 46, 3360.	3.3	12
11	Fabrication and Characterization of an 8 Ã— 8 Terahertz Photoconductive Antenna Array for Spatially Resolved Time Domain Spectroscopy and Imaging Applications. IEEE Access, 2021, 9, 117691-117702.	4.2	15
12	New Materials and Structures for Efficient Terahertz (THz) Spectroscopy. Journal of Communications Technology and Electronics, 2021, 66, 1045-1052.	0.5	0
13	Photoconductive THz Detector Based on New Functional Layers in Multi-Layer Heterostructures. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2021, 129, 851-856.	0.6	0
14	Optimization of THz quantum cascade lasers with an active module based on two-quantum wells for high-temperature operation. Journal of Physics: Conference Series, 2021, 2086, 012086.	0.4	0
15	The progress and perspectives of terahertz technology for diagnosis of neoplasms: a review. Journal of Optics (United Kingdom), 2020, 22, 013001.	2.2	135
16	Sub-terahertz FET detector with self-assembled Sn-nanothreads. Journal Physics D: Applied Physics, 2020, 53, 075102.	2.8	7
17	Emission Efficiency of Terahertz Antennas with Conventional Topology and Metal Metasurface: A Comparative Analysis. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2020, 128, 1018-1025.	0.6	5
18	A Photoconductive THz Detector Based on a Superlattice Heterostructure with Plasmonic Amplification. Technical Physics Letters, 2020, 46, 1111-1115.	0.7	7

#	Article	IF	Citations
19	Arsenides-and related III-V materials-based multilayered structures for terahertz applications: Various designs and growth technology. Progress in Crystal Growth and Characterization of Materials, 2020, 66, 100485.	4.0	42
20	HgCdTe-based quantum cascade lasers operating in the GaAs phonon Reststrahlen band predicted by the balance equation method. Optics Express, 2020, 28, 25371.	3.4	17
21	Proof of concept for continuously-tunable terahertz bandpass filter based on a gradient metal-hole array. Optics Express, 2020, 28, 26228.	3.4	20
22	Plasmonic nanojet: an experimental demonstration. Optics Letters, 2020, 45, 3244.	3.3	23
23	Plasmonic nanojet: an experimental demonstration: publisherâ€™s note. Optics Letters, 2020, 45, 3418.	3.3	3
24	Prospects of terahertz technology in diagnosis of human brain tumors â€“ A review. Journal of Biomedical Photonics and Engineering, 2020, 6, .	0.7	27
25	All-dielectric metalens based on a single colloidal particle for photoconductive optical-to-terahertz switches. Russian Technological Journal, 2020, 8, 78-86.	1.0	6
26	Strained superlattices InGaAs/InAlAs with ultrashort photocarrier lifetime. , 2020, , .		0
27	Far-infrared photodetection in graphene nanoribbon heterostructures with black-phosphorus base layers. Optical Engineering, 2020, 60, .	1.0	1
28	THz quantum cascade lasers based on GaAs/AlGaAs and HgCdTe material systems. , 2020, , .		1
29	Design and fabrication of terahertz quantum cascade laser with double metal waveguide based on multilayer GaAs/AlGaAs heterostructures. IOP Conference Series: Materials Science and Engineering, 2019, 475, 012020.	0.6	1
30	Balance-equation method for simulating terahertz quantum-cascade lasers using a wave-function basis with reduced dipole moments of tunnel-coupled states. Quantum Electronics, 2019, 49, 913-918.	1.0	15
31	Terahertz Microscope Based on Solid Immersion Effect for Imaging of Biological Tissues. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2019, 126, 560-567.	0.6	16
32	Plasmonic Photoconductive Antennas for Terahertz Pulsed Spectroscopy and Imaging Systems. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2019, 126, 580-586.	0.6	10
33	Enhanced terahertz emission from strain-induced InGaAs/InAlAs superlattices. Journal of Applied Physics, 2019, 125, .	2.5	31
34	Negative photoconductivity and hot-carrier bolometric detection of terahertz radiation in graphene-phosphorene hybrid structures. Journal of Applied Physics, 2019, 125, 151608.	2.5	12
35	Shaping the spectrum of terahertz photoconductive antenna by frequency-dependent impedance modulation. Semiconductor Science and Technology, 2019, 34, 034005.	2.0	38
36	Terahertz photoconductive emitter with dielectric-embedded high-aspect-ratio plasmonic grating for operation with low-power optical pumps. AIP Advances, 2019, 9, .	1.3	43

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37	Metallic and dielectric metasurfaces in photoconductive terahertz devices: a review. Optical Engineering, 2019, 59, 1.	1.0	61
38	Negative and positive terahertz and infrared photoconductivity in uncooled graphene. Optical Materials Express, 2019, 9, 585.	3.0	24
39	Plasmonic terahertz emitters with high-aspect ratio metal gratings. , 2019, , .		0
40	Lateral terahertz hot-electron bolometer based on an array of Sn nanothreads in GaAs. Journal Physics D: Applied Physics, 2018, 51, 135101.	2.8	17
41	Frequency Characteristics of GaN Field-Effect Transistors with Traps in the Barrier Layer. Russian Microelectronics, 2018, 47, 137-141.	0.5	0
42	The Role of Excitation Photons Energy in the Photoinduced Carrier Dynamics in InGaAs/InAlAs Superlattice Heterostructures. Technical Physics Letters, 2018, 44, 1115-1119.	0.7	3
43	Mode loss spectra in THz quantum-cascade lasers with gold- and silver-based double metal waveguides. Quantum Electronics, 2018, 48, 1005-1008.	1.0	16
44	Photonic Hook Plasmons: A New Curved Surface Wave. Annalen Der Physik, 2018, 530, 1800359.	2.4	34
45	Temperature Dependences of the Threshold Current and Output Power of a Quantum-Cascade Laser Emitting at 3.3 THz. Semiconductors, 2018, 52, 1380-1385.	0.5	14
46	Electrical modulation of terahertz radiation using graphene-phosphorene heterostructures. Semiconductor Science and Technology, 2018, 33, 124010.	2.0	19
47	Real-space-transfer mechanism of negative differential conductivity in gated graphene-phosphorene hybrid structures: Phenomenological heating model. Journal of Applied Physics, 2018, 124, 114501.	2.5	15
48	Reflection-mode continuous-wave 0.15Î»-resolution terahertz solid immersion microscopy of soft biological tissues. Applied Physics Letters, 2018, 113, .	3.3	80
49	Ultrafast Dynamics of Photoexcited Charge Carriers in In0.53Ga0.47As/In0.52Al0.48As Superlattices under Femtosecond Laser Excitation. Semiconductors, 2018, 52, 864-869.	0.5	5
50	Terahertz solid immersion microscopy for sub-wavelength-resolution imaging of biological objects and tissues. , 2018, , .		4
51	Terahertz emission from InGaAs with increased indium content. , 2018, , .		0
52	Energy spectrum and thermal properties of a terahertz quantum-cascade laser based on the resonant-phonon depopulation scheme. Semiconductors, 2017, 51, 514-519.	0.5	15
53	Terahertz radiation in In0.38Ga0.62As grown on a GaAs wafer with a metamorphic buffer layer under femtosecond laser excitation. Semiconductors, 2017, 51, 509-513.	0.5	16
54	Electrical and thermal properties of photoconductive antennas based on In x Ga1 â€“ x As (x > 0.3) with a metamorphic buffer layer for the generation of terahertz radiation. Semiconductors, 2017, 51, 1218-1223.	0.5	14

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55	The influence of gate length on the electron injection of velocity in an AlGaN/AlN/GaN ĐĐ•ĐœĐ¢ channel. Technical Physics Letters, 2017, 43, 733-735.	0.7	2
56	Epitaxial stresses in an InGaAs photoconductive layer for terahertz antennas. Technical Physics Letters, 2017, 43, 1020-1022.	0.7	8
57	Total Efficiency of the Optical-to-Terahertz Conversion in Photoconductive Antennas Based on LT-GaAs and In0.38Ga0.62As. Russian Microelectronics, 2017, 46, 408-413.	0.5	9
58	Intensive Terahertz Radiation from InXGa1-XAs due to Photo-Dember Effect. International Journal of High Speed Electronics and Systems, 2016, 25, 1640023.	0.7	3
59	Terahertz Quantum-Cascade Laser Based on the Resonant-Phonon Depopulation Scheme. International Journal of High Speed Electronics and Systems, 2016, 25, 1640022.	0.7	6
60	Promising materials for an electronic component base used to create terahertz frequency range (0.5â€“5.0 THz) generators and detectors. Bulletin of the Russian Academy of Sciences: Physics, 2016, 80, 476-478.	0.6	7
61	Electron transport and optical properties of structures with atomic tin nanowires on vicinal GaAs substrates. Semiconductors, 2016, 50, 185-190.	0.5	5
62	Fabrication of a terahertz quantum-cascade laser with a double metal waveguide based on multilayer GaAs/AlGaAs heterostructures. Semiconductors, 2016, 50, 1377-1382.	0.5	20
63	Investigation of the optical properties of GaAs with Î´-Si doping grown by molecular-beam epitaxy at low temperatures. Semiconductors, 2015, 49, 911-914.	0.5	17
64	Pseudomorphic HEMT with Sn nanowires on a vicinal GaAs substrate. Semiconductor Science and Technology, 2015, 30, 085009.	2.0	7
65	Investigation and Fabrication of the Semiconductor Devices Based on Metamorphic InAlAs/InGaAs/InAlAs Nanoheterostructures for THz Applications. International Journal of High Speed Electronics and Systems, 2015, 24, 1520001.	0.7	11
66	Photoluminescence of heterostructures containing an In x Ga1â€“x As quantum well with a high in content at different excitation powers. Semiconductors, 2015, 49, 1218-1221.	0.5	5
67	Metamorphic nanoheterostructures for millimeter-wave electronics. Nanotechnologies in Russia, 2015, 10, 593-599.	0.7	10
68	MHEMT with a power-gain cut-off frequency of f max = 0.63 THz on the basis of a In0.42Al0.58As/In0.42Ga0.58As/In0.42Al0.58As/GaAs nanoheterostructure. Semiconductors, 2014, 48, 69-72.	0.5	18
69	Electrical and optical properties of near-surface AlGaAs/InGaAs/AlGaAs quantum wells with different quantum-well depths. Semiconductors, 2013, 47, 1203-1208.	0.5	8
70	The built-in electric field in P-HEMT heterostructures with near-surface quantum wells Al_xGa_{1â^'x}As/In_yGa_{1â^'y}As/GaAs. Journal of Physics: Conference Series, 2012, 345, 012015.	0.4	7
71	Electron effective masses in an InGaAs quantum well with InAs and GaAs inserts. Semiconductor Science and Technology, 2012, 27, 035021.	2.0	24
72	Electron mobility and effective mass in composite InGaAs quantum wells with InAs and GaAs nanoinserts. Semiconductors, 2012, 46, 484-490.	0.5	17

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73	Structural and electrical properties of quantum wells with nanoscale InAs inserts in In y Al1 â˜' y As/In x Ga1 â˜' x As heterostructures on InP substrates. Crystallography Reports, 2011, 56, 298-309.	0.6	11
74	Effect of the built-in electric field on optical and electrical properties of AlGaAs/InGaAs/GaAs P-HEMT nanoheterostructures. Semiconductors, 2011, 45, 657-662.	0.5	19
75	Scattering and electron mobility in combination-doped HFET-structures AlGaAs/InGaAs/AlGaAs with high electron density. Semiconductors, 2011, 45, 1321-1326.	0.5	6