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	The progress and perspectives of terahertz technology for diagnosis of neoplasms: a review. Journal of Optics (United Kingdom), 2020, 22, 013001.	2.2	135
2	Reflection-mode continuous-wave 0.15Î»-resolution terahertz solid immersion microscopy of soft biological tissues. Applied Physics Letters, 2018, 113, .	3.3	80
3	Metallic and dielectric metasurfaces in photoconductive terahertz devices: a review. Optical Engineering, 2019, 59, 1.	1.0	61
4	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
5	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
6	Shaping the spectrum of terahertz photoconductive antenna by frequency-dependent impedance modulation. Semiconductor Science and Technology, 2019, 34, 034005.	2.0	38
7	Photonic Hook Plasmons: A New Curved Surface Wave. Annalen Der Physik, 2018, 530, 1800359.	2.4	34
8	Enhanced terahertz emission from strain-induced InGaAs/InAlAs superlattices. Journal of Applied Physics, 2019, 125, .	2.5	31
9	Prospects of terahertz technology in diagnosis of human brain tumors â€“ A review. Journal of Biomedical Photonics and Engineering, 2020, 6, .	0.7	27
10	Electron effective masses in an InGaAs quantum well with InAs and GaAs inserts. Semiconductor Science and Technology, 2012, 27, 035021.	2.0	24
11	Negative and positive terahertz and infrared photoconductivity in uncooled graphene. Optical Materials Express, 2019, 9, 585.	3.0	24
12	Plasmonic nanojet: an experimental demonstration. Optics Letters, 2020, 45, 3244.	3.3	23
13	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
14	Object-dependent spatial resolution of the reflection-mode terahertz solid immersion microscopy. Optics Express, 2021, 29, 3553.	3.4	20
15	Proof of concept for continuously-tunable terahertz bandpass filter based on a gradient metal-hole array. Optics Express, 2020, 28, 26228.	3.4	20
16	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
17	Electrical modulation of terahertz radiation using graphene-phosphorene heterostructures. Semiconductor Science and Technology, 2018, 33, 124010.	2.0	19
18	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

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19	Electron mobility and effective mass in composite InGaAs quantum wells with InAs and GaAs nanoinserts. Semiconductors, 2012, 46, 484-490.	0.5	17
20	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
21	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
22	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
23	Terahertz solid immersion microscopy: Recent achievements and challenges. Applied Physics Letters, 2022, 120, .	3.3	17
24	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
25	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
26	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
27	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
28	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
29	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
30	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
31	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
32	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
33	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
34	Experimental verification of a plasmonic hook in a dielectric Janus particle. Applied Physics Letters, 2021, 118, 131107.	3.3	12
35	Efficient optical-to-terahertz conversion in large-area InGaAs photo-Dember emitters with increased indium content. Optics Letters, 2021, 46, 3360.	3.3	12
36	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

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37	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
38	Metamorphic nanoheterostructures for millimeter-wave electronics. Nanotechnologies in Russia, 2015, 10, 593-599.	0.7	10
39	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
40	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
41	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
42	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
43	Epitaxial stresses in an InGaAs photoconductive layer for terahertz antennas. Technical Physics Letters, 2017, 43, 1020-1022.	0.7	8
44	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
45	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
46	Pseudomorphic HEMT with Sn nanowires on a vicinal GaAs substrate. Semiconductor Science and Technology, 2015, 30, 085009.	2.0	7
47	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
48	Sub-terahertz FET detector with self-assembled Sn-nanothreads. Journal Physics D: Applied Physics, 2020, 53, 075102.	2.8	7
49	A Photoconductive THz Detector Based on a Superlattice Heterostructure with Plasmonic Amplification. Technical Physics Letters, 2020, 46, 1111-1115.	0.7	7
50	Scattering and electron mobility in combination-doped HFET-structures AlGaAs/InGaAs/AlGaAs with high electron density. Semiconductors, 2011, 45, 1321-1326.	0.5	6
51	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
52	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
53	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
54	Electron transport and optical properties of structures with atomic tin nanowires on vicinal GaAs substrates. Semiconductors, 2016, 50, 185-190.	0.5	5

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55	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
56	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
57	Terahertz solid immersion microscopy for sub-wavelength-resolution imaging of biological objects and tissues. , 2018, , .		4
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	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
60	Plasmonic nanojet: an experimental demonstration: publisherâ€™s note. Optics Letters, 2020, 45, 3418.	3.3	3
61	The influence of gate length on the electron injection of velocity in an AlGaN/AlN/GaN ÐÐ•ÐœÐ¢ channel. Technical Physics Letters, 2017, 43, 733-735.	0.7	2
62	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
63	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
64	Far-infrared photodetection in graphene nanoribbon heterostructures with black-phosphorus base layers. Optical Engineering, 2020, 60, .	1.0	1
65	THz quantum cascade lasers based on GaAs/AlGaAs and HgCdTe material systems. , 2020, , .		1
66	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
67	Frequency Characteristics of GaN Field-Effect Transistors with Traps in the Barrier Layer. Russian Microelectronics, 2018, 47, 137-141.	0.5	0
68	Optical light confinement in terahertz antennas. AIP Conference Proceedings, 2021, , .	0.4	0
69	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
70	New Materials and Structures for Efficient Terahertz (THz) Spectroscopy. Journal of Communications Technology and Electronics, 2021, 66, 1045-1052.	0.5	0
71	Terahertz emission from InGaAs with increased indium content. , 2018, , .		0
72	Plasmonic terahertz emitters with high-aspect ratio metal gratings. , 2019, , .		0

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73	Strained superlattices InGaAs/InAlAs with ultrashort photocarrier lifetime. , 2020, , .		0
74	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
75	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