

# Alexey E Fedotov

## List of Publications by Year in descending order

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80  
papers

745  
citations

623699

14  
h-index

580810

25  
g-index

80  
all docs

80  
docs citations

80  
times ranked

329  
citing authors

#	ARTICLE	IF	CITATIONS
1	Moderately relativistic high-harmonic gyrotrons for millimeter/submillimeter wavelength band. IEEE Transactions on Plasma Science, 1999, 27, 456-461.	1.3	88
2	Gain Analysis of a 0.2-THz Traveling-Wave Tube With Sheet Electron Beam and Staggered Grating Slow Wave Structure. IEEE Transactions on Electron Devices, 2018, 65, 2129-2134.	3.0	66
3	Terahertz Orotrons and Oromultipliers. IEEE Transactions on Plasma Science, 2010, 38, 1466-1471.	1.3	60
4	Generation of Rogue Waves in Gyrotrons Operating in the Regime of Developed Turbulence. Physical Review Letters, 2017, 119, 034801.	7.8	48
5	Experimental demonstration of Smith's Purcell radiation enhancement by frequency multiplication in open cavity. Applied Physics Letters, 2011, 98, .	3.3	37
6	Frequency Tunable sub-THz Gyrotron for Direct Measurements of Positronium Hyperfine Structure. Journal of Infrared, Millimeter, and Terahertz Waves, 2018, 39, 975-983.	2.2	33
7	Numerical Study of a Low-Voltage Gyrotron (€Gyrotrino€) for DNP/NMR Spectroscopy. IEEE Transactions on Plasma Science, 2017, 45, 644-648.	1.3	23
8	Operation of a sub-terahertz CW gyrotron with an extremely low voltage. Physics of Plasmas, 2017, 24, .	1.9	22
9	Sources of Coherent Terahertz Radiation. AIP Conference Proceedings, 2006, , .	0.4	21
10	Excitation of orotron oscillations at the doubled frequency of a surface wave. Radiophysics and Quantum Electronics, 2007, 50, 780-785.	0.5	21
11	Theory of gyro devices with thin electron beams (large-orbit gyrotrons). Technical Physics, 1998, 43, 1219-1225.	0.7	19
12	THz Gyrotron and BWO Designed for Operation in DNP-NMR Spectrometer Magnet. Journal of Infrared, Millimeter, and Terahertz Waves, 2013, 34, 837-846.	2.2	19
13	Broadband Orotron Operation at Millimeter and Submillimeter Waves. Journal of Infrared, Millimeter and Terahertz Waves, 2002, 23, 1595-1601.	0.6	16
14	Smooth Wideband Frequency Tuning in Low-Voltage Gyrotron With Cathode-End Power Output. IEEE Transactions on Electron Devices, 2017, 64, 5147-5150.	3.0	16
15	Smith's Purcell frequency multiplier with synchronization of radiation from a wide electron beam. Applied Physics Letters, 2009, 94, .	3.3	14
16	An Experimental Investigation of a 0.8 THz Double-Beam Gyrotron. Journal of Infrared, Millimeter, and Terahertz Waves, 2019, 40, 1114-1128.	2.2	14
17	Temporal Dynamics of Mode Interaction in Submillimeter-Wave Second-Harmonic Gyrotron. Journal of Infrared, Millimeter and Terahertz Waves, 2001, 22, 1409-1420.	0.6	13
18	Pulsed wideband orotrons of millimeter and submillimeter waves. Radiophysics and Quantum Electronics, 2006, 49, 866-871.	0.5	13

#	ARTICLE	IF	CITATIONS
19	Effective Co-Generation of Opposite and Forward Waves in Cyclotron-Resonance Masers. Physical Review Letters, 2000, 85, 3424-3427.	7.8	12
20	Design and Numerical Analysis of W-band Oscillators With Hollow Electron Beam. IEEE Transactions on Electron Devices, 2014, 61, 1795-1799.	3.0	12
21	High-frequency devices with weakly relativistic hollow thin-wall electron beams. Physics of Plasmas, 2012, 19, 020704.	1.9	10
22	Electron-optical system for a high-current Ka-band relativistic gyrotron. Physics of Plasmas, 2019, 26, .	1.9	10
23	Low-Voltage Operation of the Double-Beam Gyrotron at 400 GHz. IEEE Transactions on Electron Devices, 2020, 67, 673-676.	3.0	10
24	Relativistic Sub-THz Surface-Wave Oscillators With Transverse Gaussian-Like Radiation Output. IEEE Electron Device Letters, 2021, 42, 751-754.	3.9	9
25	Development of High-Power Millimeter-Wave Surface-Wave Generators Based on Relativistic Ribbon Electron Beams. Radiophysics and Quantum Electronics, 2020, 63, 458-468.	0.5	9
26	New Versions of Terahertz Radiation Sources for Dynamic Nuclear Polarization in Nuclear Magnetic Resonance Spectroscopy. Radiophysics and Quantum Electronics, 2014, 56, 532-541.	0.5	8
27	Gyrotron generation of broadband chaotic radiation under overlapping of high- and low-frequency resonances. Technical Physics, 2017, 62, 1562-1568.	0.7	8
28	Developing a high-current relativistic millimeter-wave gyrotron. Bulletin of the Russian Academy of Sciences: Physics, 2018, 82, 48-52.	0.6	8
29	Chaos and Hyperchaos in a Ka-Band Gyrotron. IEEE Electron Device Letters, 2021, 42, 1073-1076.	3.9	8
30	Theoretical and Experimental Investigations of Terahertz-Range Gyrotrons with Frequency and Spectrum Control. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 1131-1143.	2.2	7
31	Millimeter and submillimeter-wave, high-gradient accelerating structures. AIP Conference Proceedings, 2017, , .	0.4	6
32	Experimental Observation of Chaotic Generation at 1.5% Spectral Width in a Gyrotron under Large Supercriticality Conditions. Technical Physics Letters, 2019, 45, 511-514.	0.7	6
33	Experimental Demonstration of the Possibility to Expand the Band of Smooth Tuning of Frequency Generation in Short-Cavity Gyrotrons. Radiophysics and Quantum Electronics, 2019, 61, 797-800.	0.5	6
34	Widening of the Frequency Tuning Bandwidth in a Subterahertz Gyrotron with an External Bragg Reflector. Radiophysics and Quantum Electronics, 2020, 63, 363-370.	0.5	6
35	Transverse dynamics of $\text{D}^\circ$ surface wave excited by $\text{D}^\circ$ wide electron beam. Physics of Plasmas, 2012, 19, 033103.	1.9	5
36	Microwave Undulators and Electron Generators for New-Generation Free-Electron Lasers. Radiophysics and Quantum Electronics, 2016, 58, 755-768.	0.5	5

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37	Imaging of spatial distributions of the millimeter wave intensity by using the Visible Continuum Radiation from a discharge in a Cs-Xe mixture. Part II: Demonstration of application capabilities of the technique. Plasma Physics Reports, 2017, 43, 778-791.	0.9	5
38	A gyrodevice based on simultaneous excitation of opposite and forward waves (Gyrotron BWO-TWT). IEEE Transactions on Plasma Science, 2000, 28, 1742-1746.	1.3	4
39	Nonlocality of microwave-induced variations in the intensity of the visible continuum from a medium-pressure cesium-xenon dc discharge. Physics of Plasmas, 2012, 19, 033508.	1.9	4
40	Magnetron-Injection Gun with Increased Current for Frequency Tunable Medium Power Sub-THz Gyrotron. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 1488-1497.	2.2	4
41	Frequency-Tunable Second Harmonic Gyrotron With Selective Cavity: Design and Simulations. IEEE Transactions on Electron Devices, 2022, 69, 1402-1408.	3.0	4
42	Experimental study of CRM with simultaneous excitation of traveling and near-cutoff waves (CARM-gyrotron). IEEE Transactions on Plasma Science, 2001, 29, 609-612.	1.3	3
43	Development of the Orotrons at Millimeter and Submillimeter Wavelength Range. , 2007, , .		3
44	Project of gyrotron for DNP applications based on NMR magnet. , 2016, , .		3
45	A Compact THz Source for Enhancing the Sensitivity of Nuclear Magnetic Resonance Spectroscopy with Dynamic Nuclear Polarization. Bulletin of the Russian Academy of Sciences: Physics, 2018, 82, 1592-1595.	0.6	3
46	Relativistic Sub-THz Surface-Wave Sheet-Beam Amplifier With Transverse Energy Input and Output. IEEE Transactions on Electron Devices, 2022, 69, 759-762.	3.0	3
47	Spectrum of synchrotron radiation from an extended source. Technical Physics, 1997, 42, 449-451.	0.7	2
48	Cooperation of traveling and quasi-cutoff waves in a cyclotron-resonance maser. Technical Physics, 2001, 46, 1001-1008.	0.7	2
49	Imaging the Output Field Pattern of Short Millimeter Wave Sources Using Visible Continuum Emitted by the Cs-Xe DC Discharge. , 2006, , .		2
50	Design and Modeling of a Slow-Wave 260 GHz Tripler. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 1048-1052.	3.1	2
51	Efficient excitation of high axial modes in simulations of low-voltage gyrotron. , 2017, , .		2
52	Possibilities of Increasing the Output Radiation Power of High-Current Relativistic Gyrotrons Using Operating Modes of the TM Type. Bulletin of the Russian Academy of Sciences: Physics, 2020, 84, 66-69.	0.6	2
53	RF Space-Charge Effects in CRM with Arbitrary Phase Velocity of the Operating Wave. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 939-956.	0.6	1
54	Imaging of Short Millimeter Waves using the Visible Continuum Emitted by the Cs-Xe DC Discharge. , 2007, , .		1

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55	A Theory of the Orotron with an Inclined Electron Beam. Journal of Infrared, Millimeter and Terahertz Waves, 2008, 29, 997-1003.	0.6	1
56	Orotron oscillators and frequency multipliers as sources of coherent terahertz radiation. , 2009, , .		1
57	High-frequency devices with weakly relativistic hollow thin-wall electron beams. , 2012, , .		1
58	3D modeling of a sheet-beam sub-THz traveling wave tube. , 2017, , .		1
59	Mechanisms of Intense Pulses Generation in Gyrodevices. , 2019, , .		1
60	Increase of Gyrotron Output Power at High-Order Axial Mode Through an After-Cavity Excitation of the Next Transverse Mode. Journal of Infrared, Millimeter, and Terahertz Waves, 2021, 42, 684-700.	2.2	1
61	Development of Second-Harmonic Terahertz Gyrotrons with Highly Selective Cavities. , 2021, , .		1
62	The theory of clinotron with non-fixed longitudinal structure of RF field. , 2008, , .		0
63	Transverse dynamics of the surface wave excited by wide electron beam. , 2010, , .		0
64	Orotron operation at the second harmonic of the surface wave frequency. , 2010, , .		0
65	High-harmonic THz gyrotrons and gyro-multipliers. , 2013, , .		0
66	Efficient Control of Output Parameters of the Medium Power Gyrotrons. , 2018, , .		0
67	Towards a Tunable sub-THz Gyrotron for Spectroscopy of Positronium. , 2018, , .		0
68	Possibility of Effective High-Frequency Generation in Low-Voltage Gyrotrons at the Second Cyclotron Harmonic. Radiophysics and Quantum Electronics, 2018, 61, 204-215.	0.5	0
69	Frequency Tunable sub-THz Gyrotrons for Spectroscopy Applications. EPJ Web of Conferences, 2018, 187, 01025.	0.3	0
70	Extension of Frequency Tuning Band in sub-THz Gyrotrons with Strong External Reflections. , 2019, , .		0
71	Development of High-Harmonic CW Gyrotron with an Operating Frequency of 1.2 THz. , 2019, , .		0
72	High Cyclotron Harmonics Excitation in Multi-beam Terahertz Range Gyrotrons. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
73	Focusing Waveguide Structure for High-Gradient Electron Acceleration by Picosecond Terahertz Pulses. Izvestiya Vysshikh Uchebnykh Zavedenij Radiofizika, 2021, 64, 216-226.	0.1	0
74	Focusing Waveguide Structure for High-Gradient Electron Acceleration by Picosecond Terahertz Pulses. Radiophysics and Quantum Electronics, 2021, 64, 195-204.	0.5	0
75	Frequency Tuning and Spectrum Control in Sub-THz Gyrotrons. , 2020, , .		0
76	Wide Tunable Sub-THz Gyrotron with Shortened Cavity and Increased Current. , 2020, , .		0
77	Project of medium-power sub-terahertz gyrotron with smooth wideband frequency tuning for spectroscopy of forbidden transitions. , 2020, , .		0
78	Design of a Tunable 400-GHz Second-Harmonic Gyrotron with Selective Grooves. , 2021, , .		0
79	Influence of the Aftercavity Interaction on the Output Power of a Gyrotron Operating at a High-Order Axial Mode. , 2021, , .		0
80	Low-voltage Gyrotron as Simple Mm-Wave Source. , 2021, , .		0