

Vladimir Bratman

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/2657399/vladimir-bratman-publications-by-year.pdf>

Version: 2024-04-20

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

119
papers

2,592
citations

27
h-index

47
g-index

144
ext. papers

3,256
ext. citations

1.9
avg, IF

4.56
L-index

#	Paper	IF	Citations
119	Efficiency of terahertz undulator radiation from short electron bunches moving in the field of permanently magnetized helices. <i>Physics of Plasmas</i> , 2021 , 28, 093301	2.1	2
118	Injection of a short electron bunch into THz radiation section with an undulator and strong guiding magnetic fields. <i>Physics of Plasmas</i> , 2021 , 28, 013101	2.1	1
117	Efficiency enhancement of THz radiation from an electron bunch in a waveguide due to low-frequency stabilization. <i>Journal of Physics: Conference Series</i> , 2020 , 1697, 012058	0.3	
116	Simultaneous high-frequency Super-Radiance and low-frequency Coherent Spontaneous Radiation from ultrarelativistic electrons in a waveguide. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2020 , 976, 164268	1.2	4
115	Capabilities of Terahertz Cyclotron and Undulator Radiation from Short Ultrarelativistic Electron Bunches. <i>Instruments</i> , 2019 , 3, 55	1.2	4
114	High-Harmonic Gyrotrons with Axis-Encircling Electron Beams at IAP RAS. <i>Radiophysics and Quantum Electronics</i> , 2019 , 62, 513-519	0.7	2
113	Evolution of dense spatially modulated electron bunches. <i>Physics of Plasmas</i> , 2018 , 25, 033102	2.1	2
112	Terahertz Large-Orbit High-Harmonic Gyrotrons at IAP RAS: Recent Experiments and New Designs. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 2287-2293	2.9	40
111	Undulator radiation of premodulated and nonmodulated electron bunches in the negative mass instability regime. <i>Physical Review Accelerators and Beams</i> , 2018 , 21,	1.8	7
110	Terahertz Undulator Radiation of Stabilized Dense Electron Beams. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2018 , 82, 1587-1591	0.4	0
109	A Compact THz Source for Enhancing the Sensitivity of Nuclear Magnetic Resonance Spectroscopy with Dynamic Nuclear Polarization. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2018 , 82, 1592-1595	0.4	2
108	Terahertz Gyrotrons at High Cyclotron Harmonics with Irregular Electrodynamic Systems. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2018 , 82, 1582-1586	0.4	
107	Possibility of Effective High-Frequency Generation in Low-Voltage Gyrotrons at the Second Cyclotron Harmonic. <i>Radiophysics and Quantum Electronics</i> , 2018 , 61, 204-215	0.7	
106	Numerical Study of a Low-Voltage Gyrotron (Gyrotrino) for DNP/NMR Spectroscopy. <i>IEEE Transactions on Plasma Science</i> , 2017 , 45, 644-648	1.3	20
105	Smooth Wideband Frequency Tuning in Low-Voltage Gyrotron With Cathode-End Power Output. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 5147-5150	2.9	10
104	Operation of a sub-terahertz CW gyrotron with an extremely low voltage. <i>Physics of Plasmas</i> , 2017 , 24, 113105	2.1	15
103	Terahertz large-orbit high-harmonic gyrotrons at IAP RAS: Recent experiments and new designs 2017 ,		1

102	Efficient excitation of high axial modes in simulations of low-voltage gyrotron 2017 ,		1
101	Electron-Optical System of the Gyrotron Designed for Operation in the DNP-NMR Spectrometer Cryomagnet (Gyrotrino). <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2017 , 38, 929-937	2.2	4
100	Project of gyrotron for DNP applications based on NMR magnet 2016 ,		3
99	Possibilities for Continuous Frequency Tuning in Terahertz Gyrotrons with Nontunable Electrodynamic Systems. <i>Radiophysics and Quantum Electronics</i> , 2016 , 58, 660-672	0.7	21
98	Experimental Study of Microwave Pulse Compression Using a Five-Fold Helically Corrugated Waveguide. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015 , 63, 1090-1096	4.1	16
97	A Long Cavity With Reduced Diffraction Q for Subterahertz and Terahertz Gyrotrons. <i>IEEE Transactions on Plasma Science</i> , 2015 , 43, 2598-2606	1.3	4
96	Negative-mass mitigation of Coulomb repulsion for terahertz undulator radiation of electron bunches. <i>Applied Physics Letters</i> , 2015 , 107, 163505	3.4	31
95	High-harmonic large orbit gyrotrons in IAP RAS 2015 ,		1
94	Undulator Radiation of Dense Plane Electron Bunches. <i>IEEE Transactions on Plasma Science</i> , 2015 , 43, 532-538	1.3	3
93	Design and Numerical Analysis of W-band Oscillators With Hollow Electron Beam. <i>IEEE Transactions on Electron Devices</i> , 2014 , 61, 1795-1799	2.9	11
92	New Versions of Terahertz Radiation Sources for Dynamic Nuclear Polarization in Nuclear Magnetic Resonance Spectroscopy. <i>Radiophysics and Quantum Electronics</i> , 2014 , 56, 532-541	0.7	8
91	Frequency Tuning in a Subterahertz Gyrotron With a Variable Cavity. <i>IEEE Transactions on Electron Devices</i> , 2014 , 61, 3529-3533	2.9	8
90	Peculiarities of the coherent spontaneous synchrotron radiation of dense electron bunches. <i>Physics of Plasmas</i> , 2014 , 21, 023103	2.1	12
89	Features of plasma glow in low pressure terahertz gas discharge. <i>Physics of Plasmas</i> , 2013 , 20, 123512	2.1	17
88	THz Gyrotron and BWO Designed for Operation in DNP-NMR Spectrometer Magnet. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2013 , 34, 837-846	2.2	18
87	High-frequency devices with weakly relativistic hollow thin-wall electron beams. <i>Physics of Plasmas</i> , 2012 , 19, 020704	2.1	9
86	Development of a Magnetic Cusp Gun for Terahertz Harmonic Gyrodevices. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 3635-3640	2.9	21
85	Numerical simulations of a co-harmonic gyrotron. <i>Journal Physics D: Applied Physics</i> , 2012 , 45, 065105	3	4

84	Gyrotron Development for High Power THz Technologies at IAP RAS. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2012 , 33, 715-723	2.2	40
83	Plasma creation by terahertz electromagnetic radiation. <i>Physics of Plasmas</i> , 2011 , 18, 083507	2.1	32
82	Mastering the terahertz domain: sources and applications. <i>Physics-Uspekhi</i> , 2011 , 54, 837-844	2.8	38
81	Experimental demonstration of Smith-Burcell radiation enhancement by frequency multiplication in open cavity. <i>Applied Physics Letters</i> , 2011 , 98, 061503	3.4	30
80	Electron-optical system of terahertz gyrotron. <i>Journal of Communications Technology and Electronics</i> , 2011 , 56, 500-507	0.5	9
79	Microwave source of multigigawatt peak power based on a relativistic backward-wave oscillator and a compressor. <i>Technical Physics</i> , 2011 , 56, 269-273	0.5	10
78	Terahertz Gyrotrons at IAP RAS: Status and New Designs. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2011 , 32, 371-379	2.2	44
77	Terahertz Orotrons and Oromultipliers. <i>IEEE Transactions on Plasma Science</i> , 2010 , 38, 1466-1471	1.3	43
76	Experimental results on microwave pulse compression using helically corrugated waveguide. <i>Journal of Applied Physics</i> , 2010 , 108, 054908	2.5	8
75	Generation of 3 GW microwave pulses in X-band from a combination of a relativistic backward-wave oscillator and a helical-waveguide compressor. <i>Physics of Plasmas</i> , 2010 , 17, 110703	2.1	29
74	Voltage-tuned relativistic backward wave oscillator. <i>Technical Physics Letters</i> , 2010 , 36, 140-143	0.7	5
73	Progress in studying a self-excited gyromultiplier 2009 ,		1
72	Large-Orbit Gyrotron operation in terahertz frequency range 2009 ,		1
71	Review of Subterahertz and Terahertz Gyrodevices at IAP RAS and FIR FU. <i>IEEE Transactions on Plasma Science</i> , 2009 , 37, 36-43	1.3	92
70	Large-orbit Subterahertz and Terahertz gyrotrons. <i>Radiophysics and Quantum Electronics</i> , 2009 , 52, 472-481	1.3	10
69	Experimental study of a fourth-harmonic gyromultiplier. <i>Physics of Plasmas</i> , 2009 , 16, 070701	2.1	25
68	Large-orbit gyrotron operation in the terahertz frequency range. <i>Physical Review Letters</i> , 2009 , 102, 245101	1.0	190
67	A 1-THz third-harmonic large-orbit gyrotron 2009 ,		1

66	Smith-Burcell frequency multiplier with synchronization of radiation from a wide electron beam. <i>Applied Physics Letters</i> , 2009 , 94, 061501	3.4	11
65	2009 ,		1
64	Terahertz high-harmonic gyrotrons and gyro-multipliers 2008 ,		2
63	Method for achievement of a multigigawatt peak power by compressing microwave pulses of a relativistic backward-wave oscillator in a helical waveguide. <i>Radiophysics and Quantum Electronics</i> , 2007 , 50, 36-48	0.7	6
62	High-efficiency wideband gyro-TWTs and gyro-BWOs with helically corrugated waveguides. <i>Radiophysics and Quantum Electronics</i> , 2007 , 50, 95-107	0.7	46
61	Excitation of orotron oscillations at the doubled frequency of a surface wave. <i>Radiophysics and Quantum Electronics</i> , 2007 , 50, 780-785	0.7	14
60	Design of a Powerful and Compact THZ Oscillator. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 2007 , 27, 1063-1071		7
59	Gyro-TWTs and Gyro-BWOs with helically corrugated waveguides 2007 ,		2
58	Imaging the Output Field Pattern of Short Millimeter Wave Sources Using Visible Continuum Emitted by the Cs-Xe DC Discharge 2006 ,		1
57	Theory and simulations of a gyrotron backward wave oscillator using a helical interaction waveguide. <i>Applied Physics Letters</i> , 2006 , 89, 091504	3.4	47
56	Sources of Coherent Terahertz Radiation. <i>AIP Conference Proceedings</i> , 2006 ,	0	17
55	RF Pulse Compression Using Helically Corrugated Waveguides. <i>AIP Conference Proceedings</i> , 2006 ,	0	3
54	Frequency multiplication in gyrotron autooscillators. <i>Technical Physics Letters</i> , 2006 , 32, 84-87	0.7	8
53	Pulsed wideband orotrons of millimeter and submillimeter waves. <i>Radiophysics and Quantum Electronics</i> , 2006 , 49, 866-871	0.7	12
52	Microwave pulse compression using a helically corrugated waveguide. <i>IEEE Transactions on Plasma Science</i> , 2005 , 33, 661-667	1.3	20
51	Electron-optical system for a large-orbit gyrotron. <i>Technical Physics</i> , 2005 , 50, 1611	0.5	6
50	Gyro-BWO experiments using a helical interaction waveguide. <i>IEEE Transactions on Electron Devices</i> , 2005 , 52, 839-844	2.9	44
49	Submillimeter-wave large-orbit gyrotron. <i>Radiophysics and Quantum Electronics</i> , 2005 , 48, 731-736	0.7	28

48	MICROWAVE DEVICES WITH HELICALLY CORRUGATED WAVEGUIDES. <i>NATO Science Series Series II, Mathematics, Physics and Chemistry</i> , 2005 , 105-114			1
47	Frequency-tunable CW gyro-BWO with a helically rippled operating waveguide. <i>IEEE Transactions on Plasma Science</i> , 2004 , 32, 884-889	1.3		32
46	Dispersion of helically corrugated waveguides: analytical, numerical, and experimental study. <i>Physical Review E</i> , 2004 , 70, 046402	2.4		38
45	Pulsed Orotron – a new microwave source for submillimeter pulse high-field electron paramagnetic resonance spectroscopy. <i>Review of Scientific Instruments</i> , 2004 , 75, 2926-2936	1.7		39
44	Compression of frequency-modulated pulses using helically corrugated waveguides and its potential for generating multigigawatt rf radiation. <i>Physical Review Letters</i> , 2004 , 92, 118301	7.4		51
43	Gyrodevices with Axis-Encircling Electron Beams. <i>AIP Conference Proceedings</i> , 2003 ,	0		1
42	Millimeter-Wave Relativistic Electron Devices. <i>Radiophysics and Quantum Electronics</i> , 2003 , 46, 769-781	0.7		2
41	Broadband Orotron Operation at Millimeter and Submillimeter Waves. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 2002 , 23, 1595-1601			10
40	Long-pulse operation at constant output power and single-frequency mode of a high-power electrostatic free-electron maser with depressed collector. <i>Physical Review Letters</i> , 2002 , 89, 214801	7.4		7
39	A high power, tunable free electron maser for fusion. <i>Fusion Engineering and Design</i> , 2001 , 53, 423-430	1.7		4
38	A follow-up of the FOM fusion FEM for 1 MW, 1 s. <i>Fusion Engineering and Design</i> , 2001 , 53, 577-586	1.7		1
37	Temporal Dynamics of Mode Interaction in Submillimeter-Wave Second-Harmonic Gyrotron. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 2001 , 22, 1409-1420			12
36	Cooperation of traveling and quasi-cutoff waves in a cyclotron-resonance maser. <i>Technical Physics</i> , 2001 , 46, 1001-1008	0.5		2
35	Experimental study of CRM with simultaneous excitation of traveling and near-cutoff waves (CARM-gyrotron). <i>IEEE Transactions on Plasma Science</i> , 2001 , 29, 609-612	1.3		2
34	Mode dynamics in a free electron maser with broadband frequency-dispersive feedback. <i>Physics of Plasmas</i> , 2001 , 8, 638-642	2.1		3
33	Effects of Spatial Reproduction and Multiplication for Electron Waves in Semiconductor Nanostructures. <i>Physica Status Solidi (B): Basic Research</i> , 2000 , 221, 459-462	1.3		8
32	Spurious excitation of near-cutoff modes in free-electron masers. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2000 , 445, 1-6	1.2		1
31	The spread of the initial energy of electrons in a gyrotron due to the negative-mass instability developing in a magnetron-injector gun. <i>Technical Physics</i> , 2000 , 45, 470-475	0.5		3

30	Space charge effects as a source of electron energy spread and efficiency degradation in gyrotrons. <i>IEEE Transactions on Plasma Science</i> , 2000 , 28, 633-637	1.3	8
29	A gyrodevice based on simultaneous excitation of opposite and forward waves (Gyrotron BWO-TWT). <i>IEEE Transactions on Plasma Science</i> , 2000 , 28, 1742-1746	1.3	4
28	Effective coupling of cyclotron autoresonance maser and "gyrotron" modes on a phase-synchronized electron beam. <i>Physical Review E</i> , 2000 , 62, 4207-15	2.4	23
27	Effective Co-generation of opposite and forward waves in cyclotron-resonance masers. <i>Physical Review Letters</i> , 2000 , 85, 3424-7	7.4	11
26	High-gain wide-band gyrotron traveling wave amplifier with a helically corrugated waveguide. <i>Physical Review Letters</i> , 2000 , 84, 2746-9	7.4	137
25	High-power electrostatic free-electron maser as a future source for fusion plasma heating: experiments in the short-pulse regime. <i>Physical Review E</i> , 1999 , 59, 6058-63	2.4	21
24	To the Problem of Single-Mode Operation in Smith-Purcell FEM. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1999 , 20, 991-1007		1
23	Moderately relativistic high-harmonic gyrotrons for millimeter/submillimeter wavelength band. <i>IEEE Transactions on Plasma Science</i> , 1999 , 27, 456-461	1.3	70
22	RF Space-Charge Effects in CRM with Arbitrary Phase Velocity of the Operating Wave. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1998 , 19, 939-956		1
21	Theory of gyro devices with thin electron beams (large-orbit gyrotrons). <i>Technical Physics</i> , 1998 , 43, 1219-1225	1.3	12
20	Gyro-TWT with a helical operating waveguide: new possibilities to enhance efficiency and frequency bandwidth. <i>IEEE Transactions on Plasma Science</i> , 1998 , 26, 508-518	1.3	125
19	Gyrotron Traveling Wave Amplifier with a Helical Interaction Waveguide. <i>Physical Review Letters</i> , 1998 , 81, 5680-5683	7.4	139
18	First microwave generation in the FOM free-electron maser. <i>Plasma Physics and Controlled Fusion</i> , 1998 , 40, A139-A156	2	12
17	Recovery of electron energy in cyclotron autoresonance masers. <i>Physics of Plasmas</i> , 1997 , 4, 2285-2291	2.1	11
16	Spectrum of synchrotron radiation from an extended source. <i>Technical Physics</i> , 1997 , 42, 449-451	0.5	1
15	Experimental study of an FEM with a microwave system of a new type. <i>IEEE Transactions on Plasma Science</i> , 1996 , 24, 744-749	1.3	10
14	High-efficiency CARM. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1996 , 375, 360-362	1.2	3
13	A method of forming a high-quality electron beam for free electron masers. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1996 , 375, 393-395	1.2	

12	To the problem of energy recuperation in gyrotrons. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1995 , 16, 459-471		15
11	Experimental demonstration of high-efficiency cyclotron-autoresonance-maser operation. <i>Physical Review Letters</i> , 1995 , 75, 3102-3105	7.4	47
10	Phase mixing of bunches and decrease of negative-mass instability increments in cyclotron resonance masers. <i>Physics of Plasmas</i> , 1995 , 2, 557-564	2.1	23
9	Radiation and radiative damping of a charged plane, oscillating with a relativistic velocity. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995 , 206, 377-382	2.3	17
8	Cyclotron autoresonance masers—Recent experiments and prospects. <i>International Journal of Electronics</i> , 1992 , 72, 969-981	1.2	27
7	Cyclotron autoresonance maser with high Doppler frequency up-conversion. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1992 , 13, 1857-1873		7
6	Millimeter-Wave HF Relativistic Electron Oscillators. <i>IEEE Transactions on Plasma Science</i> , 1987 , 15, 2-15	1.3	58
5	Powerful millimeter-wave generators based on the stimulated Cerenkov radiation of relativistic electron beams. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1984 , 5, 1311-1332		25
4	Relativistic gyrotrons and cyclotron autoresonance masers. <i>International Journal of Electronics</i> , 1981 , 51, 541-567	1.2	246
3	Conditions for self-excitation of a cyclotron resonance maser with a nonresonant electrodynamic system. <i>Radiophysics and Quantum Electronics</i> , 1975 , 18, 772-779	0.7	13
2	The starting regime for an MCR-monotron with a cavity having a low diffraction Q. <i>Radiophysics and Quantum Electronics</i> , 1974 , 17, 1181-1187	0.7	5
1	Theory of gyrotrons with a nonfixed structure of the high-frequency field. <i>Radiophysics and Quantum Electronics</i> , 1973 , 16, 474-480	0.7	115