

# Sergey Samsonov

## List of Publications by Year in Descending Order

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

89  
papers

1,259  
citations

19  
h-index

32  
g-index

114  
ext. papers

1,712  
ext. citations

2.3  
avg, IF

4  
L-index

#	Paper	IF	Citations
89	Klystron-like Cyclotron Amplification of a Transversely Propagating Wave by a Spatially Developed Electron Beam. <i>Electronics (Switzerland)</i> , <b>2022</b> , 11, 323	2.6	1
88	Waveguide Linear-to-Circular Polarization Converter With Cross Polarization Below -40 dB Within 16% Band. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2022</b> , 1-1	4.1	0
87	Atmospheric Propagation Studies and Development of New Instrumentation for Astronomy, Radar, and Telecommunication Applications in the Subterahertz Frequency Range. <i>Applied Sciences (Switzerland)</i> , <b>2022</b> , 12, 5670	2.6	0
86	Production of Multi-Gigawatt Sub-Nanosecond Microwave Pulses by the Method of Chirped-Pulse-Amplification. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 426-429	4.4	2
85	CW Multifrequency K-Band Source Based on a Helical-Waveguide Gyro-TWT With Delayed Feedback. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 330-335	2.9	3
84	Cyclotron Resonance Maser With Zigzag Quasi-Optical Transmission Line: Concept and Modeling. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 1-5	2.9	3
83	Cold-Test of Transverse Input-Output Microwave Circuit Components for a High-Power W-Band Gyro-TWT. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 98-101	4.4	
82	High-Power Tunable Source of Chaotic Radiation Based on a Ka-Band Helical Gyro-BWO. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 1394-1397	4.4	1
81	Multifrequency Radiation at the Kilowatt Power Level in a Continuous Helical Gyroresonance K-Band Backward Wave Oscillator with External Reflections. <i>Technical Physics Letters</i> , <b>2021</b> , 47, 309-312 <sup>0.7</sup>		1
80	CW Operation of a W-Band High-Gain Helical-Waveguide Gyrotron Traveling-Wave Tube. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 773-776	4.4	19
79	Multitube Helical-Waveguide Gyrotron Traveling-Wave Amplifier: Device Concept and Electron-Optical System Modeling. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 3385-3390	2.9	4
78	Microwave System of Transverse Output for a High-Power $\{W\}$ -Band Gyro-TWT. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 1221-1226	2.9	3
77	Nonlinear Cyclotron Resonance Absorber for a Microwave Subnanosecond Pulse Generator Powered by a Helical-Waveguide Gyrotron Traveling-Wave Tube. <i>Physical Review Applied</i> , <b>2020</b> , 13,	4.3	4
76	Gyro-TWTs with Helically Corrugated Waveguides: Overview of the Main Principles <b>2019</b> ,		8
75	Development of Ultrashort Pulse Generators based on Helical Gyro-TWT with Saturable Cyclotron Resonance Absorber in the Feedback Loop <b>2019</b> ,		1
74	Experimental Observation of Chaotic Generation at 1.5% Spectral Width in a Gyrotron under Large Supercriticality Conditions. <i>Technical Physics Letters</i> , <b>2019</b> , 45, 511-514	0.7	4
73	Stretching, Amplification, and Compression of Microwave Pulses Using Helically Corrugated Waveguides. <i>Radiophysics and Quantum Electronics</i> , <b>2019</b> , 62, 472-480	0.7	1

72	Studies of a Gyrotron Traveling-Wave Tube with Helically Corrugated Waveguides at IAP Ras: Results and Prospects. <i>Radiophysics and Quantum Electronics</i> , <b>2019</b> , 62, 455-466	0.7	5
71	Frequency modulation, amplification and compression of microwave pulses in a system with helically corrugated waveguides as a dispersive elements. <i>Journal of Physics: Conference Series</i> , <b>2019</b> , 1400, 044006	0.3	
70	Cusp Guns for Helical-Waveguide Gyro-TWTs of a High-Gain High-Power W-Band Amplifier Cascade. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , <b>2018</b> , 39, 447-455	2.2	5
69	. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 2334-2339	2.9	6
68	An Approach to Thermal Analysis of Helically Corrugated Waveguide Elements of Vacuum Electron Devices. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2018</b> , 66, 5206-5211	4.1	2
67	Quasi-Optical Orthomode Splitters for Input/Output of a Powerful W-Band Gyro-TWT. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 4600-4606	2.9	4
66	Cascade of Two W-Band Helical-Waveguide Gyro-TWTs With High Gain and Output Power: Concept and Modeling. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 1305-1309	2.9	28
65	Generation of trains of ultrashort microwave pulses by two coupled helical gyro-TWTs operating in regimes of amplification and nonlinear absorption. <i>Physics of Plasmas</i> , <b>2017</b> , 24, 023103	2.1	16
64	Ultrashort pulse generation based on two coupled helical gyro-TWTs. <i>EPJ Web of Conferences</i> , <b>2017</b> , 149, 04041	0.3	
63	Development of gyrotron traveling-wave tubes at IAP and GYCOM. <i>EPJ Web of Conferences</i> , <b>2017</b> , 149, 04002	0.3	6
62	Thermal analysis of gyro-amplifiers with helically corrugated waveguides. <i>EPJ Web of Conferences</i> , <b>2017</b> , 149, 04040	0.3	2
61	W-band helical-waveguide gyro-TWTs yielding high gain and high output power: Design and simulations <b>2017</b> ,		4
60	Proof-of-Principle Experiment on High-Power Gyrotron Traveling-Wave Tube With a Microwave System for Driving and Extracting Power Through One Window. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2016</b> , 26, 288-290	2.6	16
59	Radiation input/output system of a broadband W-band gyrotron traveling-wave amplifier <b>2016</b> ,		1
58	Recent experiments and simulations on gyro-TWTs with helically corrugated waveguides <b>2016</b> ,		5
57	High-Power Ka-Band Transmission Line with a Frequency Bandwidth of 1 GHz. <i>Radiophysics and Quantum Electronics</i> , <b>2016</b> , 58, 777-788	0.7	5
56	New Radiation Input/Output Systems for Millimeter-Wave Gyrotron Traveling-Wave Tubes. <i>Radiophysics and Quantum Electronics</i> , <b>2016</b> , 58, 769-776	0.7	7
55	Experimental Study of Microwave Pulse Compression Using a Five-Fold Helically Corrugated Waveguide. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2015</b> , 63, 1090-1096	4.1	16

54	A Helical-Waveguide Gyro-TWT at the Third Cyclotron Harmonic. <i>IEEE Transactions on Electron Devices</i> , <b>2015</b> , 62, 3387-3392	2.9	12
53	Mechanisms of amplification of ultrashort electromagnetic pulses in gyrotron traveling wave tube with helically corrugated waveguide. <i>Physics of Plasmas</i> , <b>2015</b> , 22, 113111	2.1	14
52	Ka-Band Gyrotron Traveling-Wave Tubes With the Highest Continuous-Wave and Average Power. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 4264-4267	2.9	78
51	Microwave System for Feeding and Extracting Power To and From a Gyrotron Traveling-Wave Tube Through One Window. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 789-791	4.4	18
50	CW Ka-Band Kilowatt-Level Helical-Waveguide Gyro-TWT. <i>IEEE Transactions on Electron Devices</i> , <b>2012</b> , 59, 2250-2255	2.9	20
49	Analysis of Dispersion and Losses in Helically Corrugated Metallic Waveguides by 2-D Vector Finite-Element Method. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2011</b> , 59, 2189-2196	4.1	12
48	Microwave source of multigigawatt peak power based on a relativistic backward-wave oscillator and a compressor. <i>Technical Physics</i> , <b>2011</b> , 56, 269-273	0.5	10
47	Method for calculation of helical-waveguide eigenmodes on the basis of solving the equivalent two-dimensional problem by field expansion in circular-waveguide modes. <i>Radiophysics and Quantum Electronics</i> , <b>2011</b> , 54, 174-184	0.7	3
46	Experimental results on microwave pulse compression using helically corrugated waveguide. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 054908	2.5	8
45	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> , <b>2010</b> , 17, 110703	2.1	29
44	Voltage-tuned relativistic backward wave oscillator. <i>Technical Physics Letters</i> , <b>2010</b> , 36, 140-143	0.7	5
43	Progress in studying a self-excited gyromultiplier <b>2009</b> ,		1
42	Development of helical-waveguide gyro-TWT and gyro-BWO <b>2009</b> ,		2
41	Calculation and Optimization of 3D Waveguiding System with Help of Integral Equation Method. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , <b>2009</b> , 30, 319-327	2.2	2
40	Optimization of frequency-modulated pulse compression in a sectioned waveguide with a helically corrugated surface. <i>Technical Physics</i> , <b>2009</b> , 54, 1655-1662	0.5	2
39	Experimental study of a fourth-harmonic gyromultiplier. <i>Physics of Plasmas</i> , <b>2009</b> , 16, 070701	2.1	25
38	Efficiency enhancement of gyrotron based setups for materials processing <b>2009</b> ,		3
37	<b>2009</b> ,		1

36	Terahertz high-harmonic gyrotrons and gyro-multipliers <b>2008</b> ,		2
35	Calculation and optimization of three-dimensional waveguide systems by the integral equation method. <i>Radiophysics and Quantum Electronics</i> , <b>2008</b> , 51, 671-680	0.7	
34	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> , <b>2007</b> , 50, 36-48	0.7	6
33	High-efficiency wideband gyro-TWTs and gyro-BWOs with helically corrugated waveguides. <i>Radiophysics and Quantum Electronics</i> , <b>2007</b> , 50, 95-107	0.7	46
32	Design of a Powerful and Compact THZ Oscillator. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , <b>2007</b> , 27, 1063-1071		7
31	Gyro-TWTs and Gyro-BWOs with helically corrugated waveguides <b>2007</b> ,		2
30	Theory and simulations of a gyrotron backward wave oscillator using a helical interaction waveguide. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 091504	3.4	47
29	Sources of Coherent Terahertz Radiation. <i>AIP Conference Proceedings</i> , <b>2006</b> ,	0	17
28	RF Pulse Compression Using Helically Corrugated Waveguides. <i>AIP Conference Proceedings</i> , <b>2006</b> ,	0	3
27	Two-dimensional realization of a method for synthesis of waveguide converters. <i>Radiophysics and Quantum Electronics</i> , <b>2006</b> , 49, 961-967	0.7	16
26	Microwave pulse compression using a helically corrugated waveguide. <i>IEEE Transactions on Plasma Science</i> , <b>2005</b> , 33, 661-667	1.3	20
25	Electron-optical system for a large-orbit gyrotron. <i>Technical Physics</i> , <b>2005</b> , 50, 1611	0.5	6
24	Gyro-BWO experiments using a helical interaction waveguide. <i>IEEE Transactions on Electron Devices</i> , <b>2005</b> , 52, 839-844	2.9	44
23	Submillimeter-wave large-orbit gyrotron. <i>Radiophysics and Quantum Electronics</i> , <b>2005</b> , 48, 731-736	0.7	28
22	Frequency-tunable CW gyro-BWO with a helically rippled operating waveguide. <i>IEEE Transactions on Plasma Science</i> , <b>2004</b> , 32, 884-889	1.3	32
21	Dispersion of helically corrugated waveguides: analytical, numerical, and experimental study. <i>Physical Review E</i> , <b>2004</b> , 70, 046402	2.4	38
20	Compression of frequency-modulated pulses using helically corrugated waveguides and its potential for generating multigigawatt rf radiation. <i>Physical Review Letters</i> , <b>2004</b> , 92, 118301	7.4	51
19	Generation of ultra-short quasi-unipolar electromagnetic pulses from quasi-planar electron bunches. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2001</b> , 475, 436-440	1.2	19

18	Cooperation of traveling and quasi-cutoff waves in a cyclotron-resonance maser. <i>Technical Physics</i> , <b>2001</b> , 46, 1001-1008	0.5	2
17	Experimental study of CRM with simultaneous excitation of traveling and near-cutoff waves (CARM-gyrotron). <i>IEEE Transactions on Plasma Science</i> , <b>2001</b> , 29, 609-612	1.3	2
16	Theoretical explanation and experimental observation of effective cyclotron coupling of traveling and near-cutoff modes on a phase-synchronized electron beam. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2000</b> , 445, 230-235	1.2	1
15	FEM with guiding magnetic field based on simultaneous fundamental and high-harmonic oscillations. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2000</b> , 445, 284-289	1.2	4
14	Effective coupling of cyclotron autoresonance maser and "gyrotron" modes on a phase-synchronized electron beam. <i>Physical Review E</i> , <b>2000</b> , 62, 4207-15	2.4	23
13	Effective Co-generation of opposite and forward waves in cyclotron-resonance masers. <i>Physical Review Letters</i> , <b>2000</b> , 85, 3424-7	7.4	11
12	High-gain wide-band gyrotron traveling wave amplifier with a helically corrugated waveguide. <i>Physical Review Letters</i> , <b>2000</b> , 84, 2746-9	7.4	137
11	Comparative analysis of electron beam quality on the operation of a FEM with axial guide magnetic field and a CARM. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>1998</b> , 407, 107-111	1.2	20
10	New opportunity of efficiency enhancement for FEL-oscillators. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>1998</b> , 407, 480-484	1.2	
9	Gyrotron Traveling Wave Amplifier with a Helical Interaction Waveguide. <i>Physical Review Letters</i> , <b>1998</b> , 81, 5680-5683	7.4	139
8	Experimental study of an FEM with a microwave system of a new type. <i>IEEE Transactions on Plasma Science</i> , <b>1996</b> , 24, 744-749	1.3	10
7	Experimental study of a high-current FEM with a broadband microwave system. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>1996</b> , 375, 377-380	1.2	3
6	High-efficiency CARM. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>1996</b> , 375, 360-362	1.2	3
5	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> , <b>1996</b> , 375, 393-395	1.2	
4	Resonant reflectors for free electron masers. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , <b>1995</b> , 16, 745-752		30
3	A method to form a rectilinear electron beam with small pulsations for free electron masers. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , <b>1995</b> , 16, 753-761		3
2	Experimental demonstration of high-efficiency cyclotron-autoresonance-maser operation. <i>Physical Review Letters</i> , <b>1995</b> , 75, 3102-3105	7.4	47
1	Cyclotron autoresonance maser with high Doppler frequency up-conversion. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , <b>1992</b> , 13, 1857-1873		7

