

Svilen Petrov Sabchevski

List of Publications by Year in descending order

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84
papers

1,131
citations

471509

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30
g-index

86
all docs

86
docs citations

86
times ranked

509
citing authors

#	ARTICLE	IF	CITATIONS
1	The Progress in the Studies of Mode Interaction in Gyrotrons. Journal of Infrared, Millimeter, and Terahertz Waves, 2022, 43, 1-47.	2.2	8
2	Gyrotrons as High-Frequency Drivers for Undulators and High-Gradient Accelerators. Applied Sciences (Switzerland), 2022, 12, 6101.	2.5	0
3	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
4	Novel and Emerging Applications of the Gyrotrons Worldwide: Current Status and Prospects. Journal of Infrared, Millimeter, and Terahertz Waves, 2021, 42, 715-741.	2.2	56
5	Influence of the Aftercavity Interaction on the Output Power of a Gyrotron Operating at a High-Order Axial Mode. , 2021, , .		0
6	Nonlinear excitation of parasitic modes in harmonic gyrotrons. Physics of Plasmas, 2020, 27, .	1.9	5
7	Gyrotron-Based Technological Systems for Material Processingâ€”Current Status and Prospects. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 1022-1037.	2.2	12
8	The Gyrotrons as Promising Radiation Sources for THz Sensing and Imaging. Applied Sciences (Switzerland), 2020, 10, 980.	2.5	55
9	An Experimental Investigation of a 0.8ÂTHz Double-Beam Gyrotron. Journal of Infrared, Millimeter, and Terahertz Waves, 2019, 40, 1114-1128.	2.2	14
10	Development and Application of Gyrotrons at FIR UF. IEEE Transactions on Plasma Science, 2018, 46, 2452-2459.	1.3	18
11	Automated Temperature Control with Adjusting Outlet Valve of Fuel in the Process of Cooking Palm Sugar. IOP Conference Series: Materials Science and Engineering, 2018, 336, 012018.	0.6	1
12	Investigation on the Particle Growth of Rutile TiO2 Suppressed by Manganese. MATEC Web of Conferences, 2018, 221, 01005.	0.2	0
13	High Purity Mode CW Gyrotron Covering the Subterahertz to Terahertz Range Using a 20 T Superconducting Magnet. IEEE Transactions on Electron Devices, 2018, 65, 3486-3491.	3.0	5
14	Banana peel reductant for leaching medium grade manganese ore in sulfuric acid solution. AIP Conference Proceedings, 2017, , .	0.4	2
15	A novel THz-band double-beam gyrotron for high-field DNP-NMR spectroscopy. Review of Scientific Instruments, 2017, 88, 094708.	1.3	57
16	Beamâ€”Wave Interaction From FEL to CARM and Associated Scaling Laws. IEEE Transactions on Electron Devices, 2017, 64, 4279-4286.	3.0	0
17	Gyrotrons for High-Power Terahertz Science and Technology at FIR UF. Journal of Infrared, Millimeter, and Terahertz Waves, 2017, 38, 62-86.	2.2	40
18	Fast Microwave-assisted Pretreatment for Bioconversion of Sawdust Lignocellulose to Glucose. Journal of Physics: Conference Series, 2017, 846, 012013.	0.4	2

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19	Formation and Particle Growth of TiO ₂ in Silica Xerogel Glass Ceramic During a Sintering Process. International Journal of Technology, 2017, 8, 1507.	0.8	3
20	Combined Hyperthermia and Photodynamic Therapy Using a Sub-THz Gyrotron as a Radiation Source. Journal of Infrared, Millimeter, and Terahertz Waves, 2016, 37, 805-814.	2.2	13
21	Structural Characterization of a Glass Ceramic Developed from TiO ₂ and a Novel Material-Silica Xerogel Converted from Sago Waste Ash. Materials Science Forum, 2016, 872, 81-86.	0.3	2
22	High thermal behavior of a new glass ceramic developed from silica xerogel/SnO ₂ composite. AIP Conference Proceedings, 2016, , .	0.4	0
23	Densification Behavior of SnO ₂ -Glass Composites Developed from the Incorporate of Silica Xerogel and SnO ₂ . International Journal of Technology, 2016, 7, 401.	0.8	0
24	Structure Formation of a Double Sintered Nanocrystalline Silica Xerogel Converted From Sago Waste Ash. Transactions of the Indian Ceramic Society, 2015, 74, 11-15.	1.0	13
25	Crystalline mullite formation from mixtures of alumina and a novel material "Silica xerogel converted from sago waste ash. Ceramics International, 2015, 41, 6488-6497.	4.8	28
26	Development of THz Gyrotrons at IAP RAS and FIR UF and Their Applications in Physical Research and High-Power THz Technologies. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 788-797.	3.1	72
27	A Numerical Study on Finite-Bandwidth Resonances of High-Order Axial Modes (HOAM) in a Gyrotron Cavity. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 628-653.	2.2	5
28	Modelling and simulation of gyrotrons for ITER. Journal of Physics: Conference Series, 2014, 516, 012028.	0.4	3
29	Current status of the development of the problem-oriented software package GYREOSS. Journal of Physics: Conference Series, 2014, 514, 012056.	0.4	3
30	Formation of porous clay ceramic using sago waste ash as a prospective additive material with controllable milling. Science of Sintering, 2014, 46, 55-64.	1.4	5
31	Development of high frequency Gyrotrons in FIR FU covering sub-THz to THz range for applications to high power THz spectroscopy. , 2013, , .		0
32	Structural Characterization of Mullite-Based Ceramic Material from Al ₂ O ₃ and Silica Xerogel Converted from Sago Waste Ash. Advanced Materials Research, 2013, 789, 262-268.	0.3	0
33	A Dual-Beam Irradiation Facility for a Novel Hybrid Cancer Therapy. Journal of Infrared, Millimeter, and Terahertz Waves, 2013, 34, 71-87.	2.2	13
34	Microstructural and Thermal Properties of Nanocrystalline Silica Xerogel Powders Converted from Sago Waste Ash Material. Materials Science Forum, 2013, 737, 110-118.	0.3	7
35	The first direct observation of positronium hyperfine splitting. , 2012, , .		0
36	Direct Observation of the Hyperfine Transition of Ground-State Positronium. Physical Review Letters, 2012, 108, 253401.	7.8	74

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37	Simulation tools for computer-aided design and numerical investigations of high-power gyrotrons. Journal of Physics: Conference Series, 2012, 356, 012044.	0.4	2
38	First observation of o-Ps to p-Ps transition and first direct measurement of positronium hyperfine splitting with sub-THz light. Hyperfine Interactions, 2012, 212, 141-147.	0.5	1
39	Structural and Microwave Properties of Silica Xerogel Glass-Ceramic Sintered by Sub-millimeter Wave Heating using a Gyrotron. Journal of Infrared, Millimeter, and Terahertz Waves, 2012, 33, 1149-1162.	2.2	18
40	Development and Applications of High-Frequency Gyrotrons in FIR FU Covering the sub-THz to THz Range. Journal of Infrared, Millimeter, and Terahertz Waves, 2012, 33, 667-694.	2.2	66
41	Direct Measurement of Positronium Hyperfine Structure: A New Horizon of Precision Spectroscopy Using Gyrotrons. Journal of Infrared, Millimeter, and Terahertz Waves, 2012, 33, 766-776.	2.2	17
42	Development of sub-terahertz gyrotrons for novel applications. , 2011, , .		7
43	Direct measurement of positronium hyperfine splitting — Testing fundamental physics with sub-THz gyrotron. , 2011, , .		2
44	Rapid Sintering of Silica Xerogel Ceramic Derived from Sago Waste Ash Using Sub-millimeter Wave Heating with a 300 GHz CW Gyrotron. Journal of Infrared, Millimeter, and Terahertz Waves, 2011, 32, 867-876.	2.2	30
45	Preparation of Porous Ceramic with Controllable Additive and Firing Temperature. Advanced Materials Research, 2011, 277, 151-158.	0.3	16
46	Precise measurement of the HFS of positronium using the zeeman effect I: Experimental set-up and RF system. Journal of Physics: Conference Series, 2010, 225, 012001.	0.4	1
47	Precise measurement of HFS of positronium using Zeeman effect. Journal of Physics: Conference Series, 2010, 225, 012019.	0.4	1
48	Probing the energy structure of positronium with a 203 GHz Fabry-Perot Cavity. Journal of Physics: Conference Series, 2010, 199, 012002.	0.4	6
49	Design of a Compact Sub-Terahertz Gyrotron for Spectroscopic Applications. Journal of Infrared, Millimeter, and Terahertz Waves, 2010, 31, 934.	2.2	9
50	Design of an Optimized Resonant Cavity for a Compact Sub-Terahertz Gyrotron. Journal of Infrared, Millimeter, and Terahertz Waves, 2010, 31, 1115-1125.	2.2	16
51	New Experiment for the First Direct Measurement of Positronium Hyperfine Splitting with Sub-THz Light. Materials Science Forum, 2010, 666, 133-137.	0.3	9
52	Development of a compact sub-terahertz second-harmonic gyrotron. , 2010, , .		2
53	Pre- and post-processing of data for simulation of gyrotrons by the CYREOSS software package. Journal of Physics: Conference Series, 2010, 207, 012032.	0.4	4
54	Experiment for the first direct measurement of the hyperfine splitting of positronium. Journal of Physics: Conference Series, 2010, 225, 012037.	0.4	3

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55	Gyrotrons FU CW V and FU CW VIII for measurement of hyperfine structure of positronium. , 2010, , .		3
56	Sago Waste Based Activated Carbon Film as an Electrode Material for Electric Double Layer Capacitor. Open Materials Science Journal, 2010, 4, 117-124.	0.2	15
57	Design of a 100 kW-384 GHz second harmonic gyrotron. , 2009, , .		0
58	The first direct measurement of the hyperfine splitting in positronium. Journal of Physics: Conference Series, 2009, 194, 152010.	0.4	4
59	Resonant Cavities for Frequency Tunable Gyrotrons. Journal of Infrared, Millimeter and Terahertz Waves, 2008, 29, 1-22.	0.6	13
60	The potential of the gyrotrons for development of the sub-terahertz and the terahertz frequency range " A review of novel and prospective applications. Thin Solid Films, 2008, 517, 1503-1506.	1.8	57
61	Modelling and simulation of new generation powerful gyrotrons for the fusion research. Journal of Physics: Conference Series, 2007, 63, 012003.	0.4	4
62	Simulation of Mode Interaction in the Gyrotron FU CW I. Journal of Infrared, Millimeter and Terahertz Waves, 2007, 28, 1079-1093.	0.6	7
63	Quasi-optical converters for high-power gyrotrons: a brief review of physical models, numerical methods and computer codes. Journal of Physics: Conference Series, 2006, 44, 102-109.	0.4	13
64	Development of new generation software tools for simulation of electron beam formation in novel high power gyrotrons. Journal of Physics: Conference Series, 2006, 44, 96-101.	0.4	1
65	Modelling and simulation of gyrotrons. Vacuum, 2005, 77, 519-525.	3.5	11
66	Development of a high harmonic gyrotron with an axis-encircling electron beam and a permanent magnet. Vacuum, 2005, 77, 539-546.	3.5	19
67	Cyclotron Autoresonance with TE and TM Guided Waves. Journal of Infrared, Millimeter and Terahertz Waves, 2005, 26, 669-689.	0.6	16
68	Conceptual Design Study of a Novel Gyrotron for NMR/DNP Spectroscopy. Journal of Infrared, Millimeter and Terahertz Waves, 2005, 26, 1241-1264.	0.6	19
69	A High Harmonic Gyrotron With an Axis-Encircling Electron Beam and a Permanent Magnet. IEEE Transactions on Plasma Science, 2004, 32, 903-909.	1.3	70
70	Design of a Large Orbit Gyrotron with a Permanent Magnet System. Journal of Infrared, Millimeter and Terahertz Waves, 2003, 24, 253-260.	0.6	17
71	Application of Novel Focusing Mirrors in Gyrotron Transmission Lines. Journal of Infrared, Millimeter and Terahertz Waves, 2002, 23, 1-19.	0.6	0
72	Simulation of a High Harmonic Gyrotron with Axis-Encircling Electron Beam and Permanent Magnet. Journal of Infrared, Millimeter and Terahertz Waves, 2002, 23, 675-692.	0.6	7

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73	Potential distribution and space-charge neutralization in technological intense electron beams – an overview. Vacuum, 2001, 62, 113-122.	3.5	12
74	Gyrotron FU series – current status of development and applications. Vacuum, 2001, 62, 123-132.	3.5	30
75	Design of a large orbit gyrotron with a permanent magnet system. Vacuum, 2001, 62, 133-142.	3.5	9
76	Design of a Quasi-Optical System to Convert TE _{0n} Mode Outputs of a Gyrotron into Gaussian Beams. Journal of Infrared, Millimeter and Terahertz Waves, 2000, 21, 577-592.	0.6	2
77	Numerical Analysis of Weakly Relativistic Large Orbit Gyrotron with Permanent Magnet System. Journal of Infrared, Millimeter and Terahertz Waves, 2000, 21, 1211-1221.	0.6	11
78	Title is missing!. Journal of Infrared, Millimeter and Terahertz Waves, 2000, 21, 1191-1209.	0.6	28
79	Design of a system converting an output radiation of frequency tunable gyrotron into a gaussian beam. International Journal of Electronics, 2000, 87, 1385-1400.	1.4	4
80	Modelling and Simulation of Magnetron Injection Guns for Submillimeter Wave Gyrotrons. Journal of Infrared, Millimeter and Terahertz Waves, 1999, 20, 1019-1035.	0.6	7
81	Modelling and simulation of beam formation in electron guns. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 381, 185-193.	1.6	12
82	An analysis of electron guns for welding. Journal Physics D: Applied Physics, 1996, 29, 1446-1453.	2.8	9
83	Computer-Aided Design of Technological Electron-Optical Systems. , 1995, , 513-524.		0
84	Computer simulation of electron beams. Journal Physics D: Applied Physics, 1994, 27, 690-697.	2.8	4