Toshitaka Idehara

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8088069/publications.pdf

Version: 2024-02-01

102	2,223	218677	243625
papers	citations	26 h-index	44 g-index

102	102	102	658
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	THE FIRST EXPERIMENT OF A THz GYROTRON WITH A PULSE MAGNET. Journal of Infrared, Millimeter and Terahertz Waves, 2007, 27, 319-331.	0.6	148
2	Review of Subterahertz and Terahertz Gyrodevices at IAP RAS and FIR FU. IEEE Transactions on Plasma Science, 2009, 37, 36-43.	1.3	120
3	Frequency tunable gyrotron using backward-wave components. Journal of Applied Physics, 2009, 105, .	2.5	111
4	Development of frequency tunable, medium power gyrotrons (Gyrotron FU series) as submillimeter wave radiation sources. IEEE Transactions on Plasma Science, 1999, 27, 340-354.	1.3	109
5	Development of 394.6 GHz CW Gyrotron (Gyrotron FU CW II) for DNP/Proton-NMR at 600 MHz. Journal of Infrared, Millimeter and Terahertz Waves, 2007, 28, 433-442.	0.6	83
6	A 150â€“600 GHz stepâ€tunable gyrotron. Journal of Applied Physics, 1993, 74, 5250-5258.	2.5	77
7	Helium-cooling and -spinning dynamic nuclear polarization for sensitivity-enhanced solid-state NMR at 14T and 30K. Journal of Magnetic Resonance, 2012, 225, 1-9.	2.1	72
8	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
9	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
10	Advanced instrumentation for DNP-enhanced MAS NMR for higher magnetic fields and lower temperatures. Journal of Magnetic Resonance, 2016, 264, 107-115.	2.1	64
11	The potential of the gyrotrons for development of the sub-terahertz and the terahertz frequency range â€” A review of novel and prospective applications. Thin Solid Films, 2008, 517, 1503-1506.	1.8	57
12	A novel THz-band double-beam gyrotron for high-field DNP-NMR spectroscopy. Review of Scientific Instruments, 2017, 88, 094708.	1.3	57
13	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
14	The Gyrotrons as Promising Radiation Sources for THz Sensing and Imaging. Applied Sciences (Switzerland), 2020, 10, 980.	2.5	55
15	A spectrometer designed for 6.7 and 14.1T DNP-enhanced solid-state MAS NMR using quasi-optical microwave transmission. Journal of Magnetic Resonance, 2012, 215, 1-9.	2.1	44
16	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
17	Development of a kW Level-200ÂGHz Gyrotron FU CW GI with an Internal Quasi-optical Mode Convertor. Journal of Infrared, Millimeter, and Terahertz Waves, 2012, 33, 292-305.	2.2	39
18	Theoretical investigation of a high efficiency and broadband subterahertz gyrotron. Applied Physics Letters, 2010, 96, .	3.3	38

#	Article	IF	Citations
19	Application of Continuously Frequency-Tunable 0.4 THz Gyrotron to Dynamic Nuclear Polarization for 600ÂMHz Solid-State NMR. Journal of Infrared, Millimeter, and Terahertz Waves, 2012, 33, 745-755.	2.2	38
20	First millimeter-wave spectroscopy of ground-state positronium. Progress of Theoretical and Experimental Physics, 2015, 2015, 11C01-0.	6.6	38
21	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
22	Development of a second cyclotron harmonic gyrotron operating at 0.8 mm wavelength. Applied Physics Letters, 1990, 56, 1743-1745.	3.3	32
23	High Field ESR Measurements Using Gyrotron FU Series as Radiation Sources. Journal of the Physical Society of Japan, 2003, 72, 172-176.	1.6	31
24	Gyrotron FU series â€" current status of development and applications. Vacuum, 2001, 62, 123-132.	3.5	30
25	Gyrotron FU CW VII for 300ÂMHz and 600ÂMHz DNP-NMR Spectroscopy. Journal of Infrared, Millimeter, and Terahertz Waves, 2010, 31, 763-774.	2.2	28
26	Analysis of a Complete Gyrotron Oscillator Using the Scattering Matrix Description. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 185-194.	0.6	27
27	Development of a highâ€frequency, secondâ€harmonic gyrotron tunable up to 636 GHz. Physics of Fluids B, 1993, 5, 1377-1379.	1.7	26
28	The Direct Spectroscopy of Positronium Hyperfine Structure Using a Sub-THz Gyrotron. Journal of Infrared, Millimeter, and Terahertz Waves, 2014, 35, 91-100.	2.2	26
29	High-power pulsed gyrotron for 300 GHz-band collective Thomson scattering diagnostics in the Large Helical Device. Nuclear Fusion, 2015, 55, 013002.	3.5	26
30	Study of Electron Beam Misalignment in a Submillimeter Wave Gyrotron. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 1303-1316.	0.6	24
31	Design of a Second Harmonic Double-Beam Continuous Wave Gyrotron with Operating Frequency of 0.79ÂTHz. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 1164-1175.	2.2	23
32	Operation of a tunable gyrotron at the second harmonic of the electron cyclotron frequency. International Journal of Electronics, 1990, 68, 1099-1111.	1.4	21
33	Quasi-optical antennas for plasma scattering. International Journal of Electronics, 1990, 68, 1063-1073.	1.4	21
34	Development of a Compact sub-THz Gyrotron FU CW CI for Application to High Power THz Technologies. Journal of Infrared, Millimeter, and Terahertz Waves, 2012, 33, 724-744.	2.2	19
35	Frequency Stabilization in a Sub-Terahertz Gyrotron With Delayed Reflections of Output Radiation. IEEE Transactions on Plasma Science, 2018, 46, 2465-2469.	1.3	19
36	Mode cooperation in a submillimeter wave gyrotron. Physics of Plasmas, 1994, 1, 3145-3147.	1.9	18

#	Article	IF	Citations
37	High Frequency and High Mode Purity Operations of Gyrotron FU IVA. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 919-930.	0.6	18
38	High-power oscillator of continuous electromagnetic radiation with a frequency of 300 GHz. Radiophysics and Quantum Electronics, 2007, 50, 420-428.	0.5	18
39	Power-Stabilization of High Frequency Gyrotrons Using a Double PID Feedback Control for Applications to High Power THz Spectroscopy. Journal of Infrared, Millimeter, and Terahertz Waves, 2014, 35, 159-168.	2.2	18
40	Broadband Continuously Frequency Tunable Gyrotron for 600 MHz DNP-NMR Spectroscopy. Plasma and Fusion Research, 2014, 9, 1206058-1206058.	0.7	18
41	Development and Application of Gyrotrons at FIR UF. IEEE Transactions on Plasma Science, 2018, 46, 2452-2459.	1.3	18
42	Highâ€frequency, step tunable, cyclotron harmonic gyrotron. Physics of Fluids B, 1991, 3, 1766-1772.	1.7	15
43	Submillimeter wave generation by second harmonic operation of tunable gyrotrons. Journal of Infrared, Millimeter and Terahertz Waves, 1992, 13, 215-227.	0.6	15
44	Improvement of Stability of High Cyclotron Harmonic Operation in the Double-Beam THz Gyrotrons. IEEE Transactions on Plasma Science, 2016, , 1-7.	1.3	15
45	Development of Third-Harmonic 1.2-THz Gyrotron With Intentionally Increased Velocity Spread of Electrons. IEEE Transactions on Electron Devices, 2020, 67, 4432-4436.	3.0	15
46	Ruby ESR Over a Wide Frequency Range in the Millimeter Wave Region. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 859-874.	0.6	14
47	An Experimental Investigation of a 0.8ÂTHz Double-Beam Gyrotron. Journal of Infrared, Millimeter, and Terahertz Waves, 2019, 40, 1114-1128.	2.2	14
48	Compact radiation module for THz spectroscopy using 300 GHz continuous-wave clinotron. Review of Scientific Instruments, 2019, 90, 034703.	1.3	14
49	Development of submillimeter wave gyrotron using 12 T superconducting magnet. Physics of Plasmas, 1995, 2, 2110-2116.	1.9	13
50	Title is missing!. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 793-801.	0.6	13
51	Higher Harmonic Operations of Submillimeter Wave Gyrotrons (Gyrotron FU Series). Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 803-816.	0.6	12
52	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
53	Reflective Gyrotron Backward-Wave Oscillator With Piecewise Frequency Tunability. IEEE Transactions on Electron Devices, 2021, 68, 324-329.	3.0	12
54	Amplitude modulation of submillimeter wave gyrotron output. Journal of Infrared, Millimeter and Terahertz Waves, 1997, 18, 391-403.	0.6	11

#	Article	IF	Citations
55	Frequency Tunable Gyrotron FU CW VA for Measuring Hyperfine Split of Positronium. Journal of Infrared, Millimeter, and Terahertz Waves, 2010, 31, 1265-1270.	2.2	11
56	Effect of the Energy Transfer from Electrons upon the Sound Wave Velocity in Weakly Ionized Plasma. Journal of the Physical Society of Japan, 1973, 35, 1747-1752.	1.6	10
57	Low-Voltage Operation of the Double-Beam Gyrotron at 400 GHz. IEEE Transactions on Electron Devices, 2020, 67, 673-676.	3.0	10
58	Convective Instability of the Bernstein Wave Propagating Obliquely to the Magnetic Field in a Beam-Plasma System. Journal of the Physical Society of Japan, 1975, 38, 1125-1132.	1.6	9
59	Absolute Instability of the Bernstein Wave in a Beam-Plasma System. Journal of the Physical Society of Japan, 1975, 39, 213-220.	1.6	7
60	Focusing of high power millimeter-wave radiation by a quasi-optical antenna system. International Journal of Electronics, 1991, 70, 979-988.	1.4	7
61	Operation of a 32 GHz gyrotron. Journal of Infrared, Millimeter and Terahertz Waves, 1997, 18, 2147-2160.	0.6	7
62	Modelling and Simulation of Magnetron Infection Guns for Submillimeter Wave Gyrotrons. Journal of Infrared, Millimeter and Terahertz Waves, 1999, 20, 1019-1035.	0.6	7
63	Title is missing!. Journal of Infrared, Millimeter and Terahertz Waves, 1999, 20, 543-558.	0.6	7
64	Conversion of Gyrotron Output into a Gaussian Beam Using the Far-Field. Journal of Infrared, Millimeter and Terahertz Waves, 1999, 20, 801-821.	0.6	6
65	A Quasi-Optical System for Converting TE0n Mode Outputs of a Gyrotron into Gaussian Beams. Journal of Infrared, Millimeter and Terahertz Waves, 2002, 23, 189-203.	0.6	6
66	Instability of the Trivelpiece Mode in a Magnetized Beam-Plasma System. Journal of the Physical Society of Japan, 1977, 42, 1730-1736.	1.6	5
67	22-70ÂGHz gyrotron development. International Journal of Electronics, 1982, 53, 533-538.	1.4	5
68	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
69	Double-Beam Gyrotron With Frequency Multiplication. IEEE Transactions on Electron Devices, 2019, 66, 2396-2400.	3.0	5
70	Fast Cyclotron Wave Excitation in a Spiral Electron Beam-Plasma System. Journal of the Physical Society of Japan, 1979, 46, 1641-1646.	1.6	5
71	Application of blazed gratings to millimeterâ€submillimeter wave gyrotrons. Journal of Applied Physics, 1993, 74, 2197-2202.	2.5	4
72	Nonlinear Regime of Amplitude Modulation in Submillimeter Wave Gyrotrons (Gyrotron FU III and IV). Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 1607-1625.	0.6	4

#	Article	IF	Citations
73	Experimental study of a THz band double-beam gyrotron. , 2017, , .		4
74	Nonadiabatic Effects on Beam-Quality Parameters for Frequency-Tunable Gyrotrons. IEEE Transactions on Electron Devices, 2020, 67, 341-346.	3.0	4
75	Terahertz-Range High-Order Cyclotron Harmonic Planar Gyrotrons with Transverse Energy Extraction. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 152-163.	2.2	4
76	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
77	Universal Electron Gun Design for a CW Third Harmonic Gyrotron with an Operating Frequency over 1ÂTHz. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 1121-1130.	2.2	4
78	Negative Absorption near the Electron Cyclotron Harmonics in Weakly Ionized Gases. Journal of Applied Physics, 1972, 43, 64-68.	2.5	3
79	Generation of a highly magnetized plasma by using the superconducting coil. Journal of Applied Physics, 1981, 52, 3276-3278.	2.5	3
80	A transmission line for plasma scattering measurements with a submillimeter wave gyrotron. Journal of Infrared, Millimeter and Terahertz Waves, 1994, 15, 1587-1602.	0.6	3
81	Frequency measurement of a submillimeter wave gyrotron output. Journal of Infrared, Millimeter and Terahertz Waves, 1997, 18, 259-272.	0.6	3
82	Development and preliminary tests of a second harmonic double-beam continuous wave gyrotron with operating frequency of 0.79 THz. , 2016, , .		3
83	Electrostatic Instability of Electron Bernstein Wave in a Beam-Plasma System. Journal of the Physical Society of Japan, 1976, 41, 1739-1744.	1.6	2
84	Ion Bernstein Wave in an Ion Beam-Plasma System. Journal of the Physical Society of Japan, 1977, 42, 1737-1743.	1.6	2
85	Measurement of frequency spectrum of submillimeterâ€wave gyrotron output using Michelson interferometer. Applied Physics Letters, 1993, 62, 832-833.	3.3	2
86	Two-Stage Energy Recovery System for THz band Double-Beam Gyrotron. , 2018, , .		2
87	Observation of a Bernstein wave propagating obliquely to the magnetic field in a streaming plasma. Journal of Applied Physics, 1974, 45, 697-699.	2.5	1
88	Effect of the Nonuniformity of the Magnetic Field on the Instability of a Spiral Beam-Plasma System. Journal of the Physical Society of Japan, 1980, 48, 616-622.	1.6	1
89	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
90	Negative Absorption Phenomenon in Weakly Ionized Mercury Plasma. Journal of the Physical Society of Japan, 1973, 34, 209-215.	1.6	0

#	Article	IF	Citations
91	Observation of the Backward Cyclotron Wave in a Spiral Elebtron Beam-Plasma System. Journal of the Physical Society of Japan, 1983, 52, 2281-2284.	1.6	0
92	Title is missing!. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 727-736.	0.6	0
93	Generation of high mode purity output of a gyrotron and its conversion to a Gaussian beam. , 0, , .		0
94	Development of Terahertz-Range Planar Gyrotrons with Transverse Energy Extraction Operating at Cyclotron Harmonics. EPJ Web of Conferences, 2018, 187, 01008.	0.3	0
95	High Cyclotron Harmonics Excitation in Multi-beam Terahertz Range Gyrotrons. , 2019, , .		0
96	An Experimental Investigation of a 0.8 THz Gyrotron with an Improved Mode Selection. , 2019, , .		0
97	Low-Voltage Adiabatic Magnetron Injection Gun for 400 GHz Gyrotron. , 2020, , .		0
98	Experiments on the Ultra Highly Magnetized Plasma Device (ULMAP-FU-I) Using a Superconducting Magnet II. KakuyÅ«gÅ•KenkyÅ«, 1980, 44, 263-268.	0.1	0
99	Experiments on the Ultra Highly Magnetized Plasma Device (ULMAP-FU-I) Using a Superconducting Magnet. KakuyÅ«gÅ•KenkyÅ«, 1980, 44, 101-114.	0.1	0
100	Plan of the Ultra Highly Magnetized Plasma Device (ULMAP-FU-I) by Using a Superconducting Magnet. KakuyÅ«gÅ•KenkyÅ«, 1980, 44, 19-28.	0.1	0
101	Design of a gyrotron operating in the submillimeter wave range.. KakuyÅ«gÅ•KenkyÅ«, 1990, 63, 117-129.	0.1	0
102	High Magnetic Field System Applicable to the Gyrotron of Millimeter Wavelength. KakuyÅ«gÅ•KenkyÅ«, 1983, 49, 133-142.	0.1	0