Manfred Thumm

List of Publications by Year
in descending order

410 papers	6,925 citations	66343 42 h-index	110387 64 g-index
423 all docs	423 docs citations	423 times ranked	2036 citing authors

#	Article	IF	Citations
1	Electron Cyclotron Heating for W7-X: Physics and Technology. Fusion Science and Technology, 2007, 52, 291-312.	1.1	230
2	State-of-the-Art of High-Power Gyro-Devices and Free Electron Masers. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 1-140.	2.2	223
3	Overview of first Wendelstein 7-X high-performance operation. Nuclear Fusion, 2019, 59, 112004.	3.5	165
4	Major results from the first plasma campaign of the Wendelstein 7-X stellarator. Nuclear Fusion, 2017, 57, 102020.	3.5	128
5	Theory of Nonuniform Waveguides: the cross-section method. , 1998, , .		128
6	2.2-MW Record Power of the 170-GHz European Preprototype Coaxial-Cavity Gyrotron for ITER. IEEE Transactions on Plasma Science, 2010, 38, 1141-1149.	1.3	126
7	A 2-MW, 170-GHz Coaxial Cavity Gyrotron. IEEE Transactions on Plasma Science, 2004, 32, 413-417.	1.3	113
8	Recent Advances in the Worldwide Fusion Gyrotron Development. IEEE Transactions on Plasma Science, 2014, 42, 590-599.	1.3	104
9	Bragg reflectors. IEEE Transactions on Plasma Science, 1992, 20, 393-402.	1.3	103
10	Frequency step-tunable (114â€“170 GHz) megawatt gyrotrons for plasma physics applications. Fusion Engineering and Design, 2001, 53, 407-421.	1.9	97
11	Novel Applications of Millimeter and Submillimeter Wave Gyro-Devices. Journal of Infrared, Millimeter and Terahertz Waves, 2001, 22, 377-386.	0.6	91
12	High Power Gyro-Devices for Plasma Heating and Other Applications. Journal of Infrared, Millimeter and Terahertz Waves, 2005, 26, 483-503.	0.6	88
13	Overview of the ITER EC H&CD system and its capabilities. Fusion Engineering and Design, 2011, 86, 951-954.	1.9	82
14	MW gyrotron development for fusion plasma applications. Plasma Physics and Controlled Fusion, 2003, 45, A143-A161.	2.1	81
15	Experimental Investigations and Analysis of Parasitic RF Oscillations in High-Power Gyrotrons. IEEE Transactions on Plasma Science, 2010, 38, 1168-1177.	1.3	80
16	EU Megawatt-Class 140-GHz CW Gyrotron. IEEE Transactions on Plasma Science, 2007, 35, 143-153.	1.3	78
17	Development of Output Windows for High-Power Long-Pulse Gyrotrons and EC Wave Applications. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 3-14.	0.6	77
18	Technical challenges in the construction of the steady-state stellarator Wendelstein 7-X. Nuclear Fusion, 2013, 53, 126001.	3.5	77

#	Article	IF	Citations
19	Novel Numerical Method for the Analysis and Synthesis of the Fields in Highly Oversized Waveguide Mode Converters. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 1661-1668.	4.6	73
20	Chemical vapor deposition diamond window for high-power and long pulse millimeter wave transmission. Review of Scientific Instruments, 1998, 69, 2160-2165.	1.3	69
21	Sintering of advanced ceramics using a 30-GHz, 10-kW, CW industrial gyrotron. IEEE Transactions on Plasma Science, 1999, 27, 547-554.	1.3	67
22	High power mode conversion for linearly polarized HE₁₁hybrid mode output. International Journal of Electronics, 1986, 61, 1135-1153.	1.4	66
23	First Experimental Results from the European Union 2-MW Coaxial Cavity ITER Gyrotron Prototype. Fusion Science and Technology, 2009, 55, 204-212.	1.1	66
24	Mode conversion due to curvature in corrugated waveguides. International Journal of Electronics, 1991, 71, 333-347.	1.4	64
25	Experimental and theoretical studies of a coaxial free-electron maser based on two-dimensional distributed feedback. Physical Review E, 2007, 76, 056406.	2.1	64
26	ITER R&D: Auxiliary Systems: Electron Cyclotron Heating and Current Drive System. Fusion Engineering and Design, 2001, 55, 281-289.	1.9	63
27	Mode coupling in corrugated waveguides with varying wall impedance and diameter change. International Journal of Electronics, 1991, 71, 827-844.	1.4	61
28	European high-power CW gyrotron development for ECRH systems. Fusion Engineering and Design, 2001, 53, 387-397.	1.9	61
29	A High-Efficiency Quasi-Optical Mode Converter for a 140-GHz 1-MW CW Gyrotron. IEEE Transactions on Electron Devices, 2005, 52, 818-824.	3.0	59
30	MPACVD-diamond windows for high-power and long-pulse millimeter wave transmission. Diamond and Related Materials, 2001, 10, 1692-1699.	3.9	57
31	Status of the new multi-frequency ECRH system for ASDEX Upgrade. Nuclear Fusion, 2008, 48, 054006.	3.5	57
32	Surface Flute Waves in Plasmas. Springer Series on Atomic, Optical, and Plasma Physics, 2014, , .	0.2	57
33	A 1.5-MW, 140-GHz, TE/sub 28,16/-coaxial cavity gyrotron. IEEE Transactions on Plasma Science, 1997, 25, 460-469.	1.3	56
34	Single-stage depressed collectors for gyrotrons. IEEE Transactions on Plasma Science, 1996, 24, 579-585.	1.3	55
35	First Operation of a Step-Frequency Tunable 1-MW Gyrotron With a Diamond Brewster Angle Output Window. IEEE Transactions on Electron Devices, 2014, 61, 1806-1811.	3.0	53
36	Progress on Gyrotrons for ITER and Future Thermonuclear Fusion Reactors. IEEE Transactions on Plasma Science, 2011, 39, 971-979.	1.3	52

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37	Using Two-Dimensional Distributed Feedback for Synchronization of Radiation from Two Parallel-Sheet Electron Beams in a Free-Electron Maser. Physical Review Letters, 2016, 117, 114801.	7.8	52
38	Recent results of the 1-MW, 140-GHz, TE/sub 22,6/-mode gyrotron. IEEE Transactions on Plasma Science, 1999, 27, 330-339.	1.3	50
39	The role of the native oxide shell on the microwave sintering of copper metal powder compacts. Journal of Alloys and Compounds, 2015, 627, 231-237.	5.5	50
40	Recent advanced technology in electron cyclotron heating systems. Fusion Engineering and Design, 1995, 26, 291-317.	1.9	48
41	Fast frequency-step-tunable high-power gyrotron with hybrid-magnet-system. IEEE Transactions on Electron Devices, 2001, 48, 101-107.	3.0	47
42	Progress in gyrotron development. Fusion Engineering and Design, 2003, 66-68, 69-90.	1.9	47
43	On the use of step-tuneable gyrotrons in ITER. Journal of Physics: Conference Series, 2005, 25, 274-282.	0.4	47
44	Theoretical investigation of an advanced launcher for a 2-MW 170-GHz TE/sub 34,19/ coaxial cavity gyrotron. IEEE Transactions on Microwave Theory and Techniques, 2006, 54, 1139-1145.	4.6	44
45	High power 170 GHz test of CVD diamond for ECH window. Journal of Infrared, Millimeter and Terahertz Waves, 1997, 18, 1495-1503.	0.6	43
46	Electron-cyclotron-resonance heating in Wendelstein 7-X: A versatile heating and current-drive method and a tool for in-depth physics studies. Plasma Physics and Controlled Fusion, 2019, 61, 014037.	2.1	43
47	ECRH and ECCD with high power gyrotrons at the stellarators W7-AS and W7-X. IEEE Transactions on Plasma Science, 1999, 27, 538-546.	1.3	42
48	Electron trapping mechanisms in magnetron injection guns. Physics of Plasmas, 2016, 23, .	1.9	42
49	D-band frequency step-tuning of A 1 MW gyrotron using a brewster output window. Journal of Infrared, Millimeter and Terahertz Waves, 1997, 18, 1465-1477.	0.6	41
50	Quasi-Optical Mode Converter/Mirror System for a High-Power Coaxial-Cavity Gyrotron. IEEE Transactions on Plasma Science, 2006, 34, 1508-1515.	1.3	41
51	From Series Production of Gyrotrons for W7-X Toward EU-1 MW Gyrotrons for ITER. IEEE Transactions on Plasma Science, 2014, 42, 1135-1144.	1.3	41
52	Design and experimental operation of a 165-GHz, 1.5-MW, coaxial-cavity gyrotron with axial RF output. IEEE Transactions on Plasma Science, 1997, 25, 470-479.	1.3	39
53	165 GHz, 1.5 MW-coaxial cavity gyrotron with depressed collector. IEEE Transactions on Plasma Science, 1999, 27, 484-489.	1.3	38
54	High-power gyrotron development at Forschungszentrum Karlsruhe for fusion applications. IEEE Transactions on Plasma Science, 2006, 34, 173-186.	1.3	38

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55	Design considerations for future DEMO gyrotrons: A review on related gyrotron activities within EUROfusion. Fusion Engineering and Design, 2017, 123, 241-246.	1.9	37
56	Towards a 2 MW, CW, 170 GHz coaxial cavity gyrotron for ITER. Fusion Engineering and Design, 2003, 66-68, 481-485.	1.9	34
57	Millimetre wave effects on sintering behaviour of metal powder compacts. Powder Metallurgy, 2006, 49, 274-280.	1.7	34
58	An Inverse Magnetron Injection Gun for the KIT 2-MW Coaxial-Cavity Gyrotron. IEEE Transactions on Electron Devices, 2016, 63, 2104-2109.	3.0	34
59	Status, Operation, and Extension of the ECRH System at ASDEX Upgrade. Journal of Infrared, Millimeter, and Terahertz Waves, 2016, 37, 45-54.	2.2	34
60	EU developments of the ITER ECRH system. Fusion Engineering and Design, 2007, 82, 454-462.	1.9	33
61	140 GHz, 1 MW CW Gyrotron Development for Fusion Applicationsâ€"Progress and Recent Results. Journal of Infrared, Millimeter, and Terahertz Waves, 2011, 32, 320-328.	2.2	33
62	Status of the development of the EU 170 GHz/1 MW/CW gyrotron. Fusion Engineering and Design, 2015, 96-97, 149-154.	1.9	33
63	Advanced electron cyclotron heating systems for next-step fusion experiments. Fusion Engineering and Design, 1995, 30, 139-170.	1.9	32
64	Mode competition using TE⁰³gyrotron cavities. International Journal of Electronics, 1992, 72, 687-720.	1.4	31
65	Transverse field collector sweep system for high power CW gyrotrons. Fusion Engineering and Design, 2007, 82, 744-750.	1.9	31
66	Coaxial cavity gyrotron with dual RF beam output. IEEE Transactions on Plasma Science, 1998, 26, 393-401.	1.3	30
67	Status report on CVD-diamond window development for high power ECRH. Fusion Engineering and Design, 2001, 53, 517-524.	1.9	30
68	Generation of High-Power Sub-THz Waves in Magnetized Turbulent Electron Beam Plasmas. Journal of Infrared, Millimeter, and Terahertz Waves, 2014, 35, 81-90.	2.2	30
69	Long-pulse operation of a 0.5 MW TE/sub 10.4/ gyrotron at 140 GHz. IEEE Transactions on Plasma Science, 1996, 24, 570-578.	1.3	29
70	Eigenvalue equations and numerical analysis of a coaxial cavity with misaligned inner rod. IEEE Transactions on Microwave Theory and Techniques, 2000, 48, 8-14.	4.6	29
71	Fast Switching and Power Combination of High-Power Electron Cyclotron Wave Beams: Principles, Numerical Results, and Experiments. Fusion Science and Technology, 2007, 52, 281-290.	1.1	29
72	Status of WENDELSTEIN 7-X construction. Nuclear Fusion, 2003, 43, 416-424.	3.5	28

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73	Recent Upgrades and Extensions of the ASDEX Upgrade ECRH System. Journal of Infrared, Millimeter, and Terahertz Waves, 2011, 32, 274-282.	2.2	28
74	Influence of emitter ring manufacturing tolerances on electron beam quality of high power gyrotrons. Physics of Plasmas, 2016, 23, .	1.9	28
75	Systematic cavity design approach for a multi-frequency gyrotron for DEMO and study of its RF behavior. Physics of Plasmas, 2016, 23, .	1.9	28
76	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
77	Innovation on high-power long-pulse gyrotrons. Plasma Physics and Controlled Fusion, 2011, 53, 124002.	2.1	27
78	Aspects of steady-state operation of the Wendelstein 7-X stellarator. Plasma Physics and Controlled Fusion, 2013, 55, 014006.	2.1	26
79	A generic mode selection strategy for high-order mode gyrotrons operating at multiple frequencies. Nuclear Fusion, 2015, 55, 013005.	3.5	26
80	Design of a 42-GHz 200-kW Gyrotron Operating at the Second Harmonic. IEEE Transactions on Microwave Theory and Techniques, 2004, 52, 686-692.	4.6	25
81	Surface-field cavity based on a two-dimensional cylindrical lattice. Applied Physics Letters, 2010, 96, 231111.	3.3	25
82	Diagnostic system for studying generation of subterahertz radiation during beam-plasma interaction in the GOL-3 facility. Plasma Physics Reports, 2012, 38, 450-459.	0.9	25
83	High-Efficiency Quasi-Optical Mode Converter for a 1-MW <formula formulatype="inline"> <tex Notation="TeX">${m TE}_{32,9}$</tex></formula>-Mode Gyrotron. IEEE Transactions on Plasma Science, 2013, 41, 2748-2753.	1.3	24
84	Mode Selection and Coaxial Cavity Design for a 4-MW 170-GHz Gyrotron, Including Thermal Aspects. IEEE Transactions on Plasma Science, 2013, 41, 853-861.	1.3	24
85	KIT coaxial gyrotron development: from ITER toward DEMO. International Journal of Microwave and Wireless Technologies, 2018, 10, 547-555.	1.9	24
86	Computer-aided analysis and design of corrugated TE11 to HE11 mode converters in highly overmoded waveguides. Journal of Infrared, Millimeter and Terahertz Waves, 1985, 6, 577-597.	0.6	23
87	Design of 170 GHz, 1.5-MW Conventional Cavity Gyrotron for Plasma Heating. IEEE Transactions on Plasma Science, 2014, 42, 1522-1528.	1.3	23
88	CW Experiments With the EU 1-MW, 170-GHz Industrial Prototype Gyrotron for ITER at KIT. IEEE Transactions on Electron Devices, 2017, 64, 3885-3892.	3.0	23
89	Orbital Angular Momentum (OAM) of Rotating Modes Driven by Electrons in Electron Cyclotron Masers. Scientific Reports, 2017, 7, 3372.	3.3	23
90	Investigation of high frequency (2.45 GHz, 30 GHz) sintering for Pb-based ferroelectrics and microscale functional devices. Ferroelectrics, 2001, 261, 15-20.	0.6	22

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91	A 2 MW, 170 GHz coaxial cavity gyrotron - experimental verification of the design of main components. Journal of Physics: Conference Series, 2005, 25, 24-32.	0.4	22
92	Efficient Frequency Step-Tunable Megawatt-Class <inline-formula> <tex-math notation="LaTeX">D </tex-math></inline-formula>-Band Gyrotron. IEEE Transactions on Electron Devices, 2015, 62, 2327-2332.	3.0	22
93	Status and future development of Heating and Current Drive for the EU DEMO. Fusion Engineering and Design, 2022, 180, 113159.	1.9	22
94	Improved gyrotron cavity with high quality factor. Journal of Infrared, Millimeter and Terahertz Waves, 1995, 16, 1481-1489.	0.6	21
95	Development of a 2-MW, CW Coaxial Gyrotron at 70 GHz and Test Facility for ITER. Journal of Physics: Conference Series, 2005, 25, 33-44.	0.4	21
96	Excitation of surface field cavity and coherence of electromagnetic field scattering on two-dimensional cylindrical lattice. Applied Physics Letters, 2010, 97, 261102.	3.3	21
97	Experimental results and recent developments on the EU 2 MW 170 GHz coaxial cavity gyrotron for ITER. EPJ Web of Conferences, 2012, 32, 04009.	0.3	21
98	Frequency-Based Investigation of Charge Neutralization Processes and Thermal Cavity Expansion in Gyrotrons. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 797-818.	2.2	21
99	A Numerical Synthesis Method for Hybrid-Type High-Power Gyrotron Launchers. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 699-706.	4.6	21
100	Conceptual design of the EU DEMO EC-system: main developments and R&D achievements. Nuclear Fusion, 2017, 57, 116009.	3.5	21
101	Analysis of Transmission Characteristics for Single and Double Disk Windows. Journal of Infrared, Millimeter and Terahertz Waves, 2003, 24, 619-628.	0.6	20
102	Highly Efficient Quasi-Optical Mode Converter for a Multifrequency High-Power Gyrotron. IEEE Transactions on Electron Devices, 2009, 56, 828-834.	3.0	20
103	Power modulation capabilities of the 140 GHz/1 MW gyrotron for the stellarator Wendelstein 7-X. Fusion Engineering and Design, 2003, 66-68, 497-502.	1.9	19
104	Progress in the 10-MW 140-GHz ECH System for the Stellarator W7-X. IEEE Transactions on Plasma Science, 2008, 36, 341-355.	1.3	19
105	Present Status of the New Multifrequency ECRH System for ASDEX Upgrade. IEEE Transactions on Plasma Science, 2008, 36, 324-331.	1.3	19
106	2 MW, 170 GHz coaxial-cavity short-pulse gyrotron — Single stage depressed collector operation. , 2014, , .		19
107	Experimental verification of the European 1 MW, 170 GHz industrial CW prototype gyrotron for ITER. Fusion Engineering and Design, 2017, 123, 490-494.	1.9	19
108	Conceptual designs of E Ã— B multistage depressed collectors for gyrotrons. Physics of Plasmas, 2017, 24, .	1.9	19

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109	Gyrotron multistage depressed collector based on Eâ€‰Ã—â€‰B drift concept using azimuthal electric field. I. Basic design. Physics of Plasmas, 2018, 25, .	1.9	19
110	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
111	The New Multifrequency Electron Cyclotron Resonance Heating System for ASDEX Upgrade. Fusion Science and Technology, 2007, 52, 313-320.	1.1	18
112	Progress in design and integration of the ITER Electron Cyclotron H&CD system. Fusion Engineering and Design, 2009, 84, 651-655.	1.9	18
113	EU DEMO EC system preliminary conceptual design. Fusion Engineering and Design, 2018, 136, 1173-1177.	1.9	18
114	Overview of recent gyrotron R&D towards DEMO within EUROfusion Work Package Heating and Current Drive. Nuclear Fusion, 2019, 59, 066014.	3.5	18
115	Electron Cyclotron Resonance Heating Transmission Line and Launching System for the Wendelstein VII-AS Stellarator. Fusion Science and Technology, 1990, 17, 76-85.	0.6	17
116	Improvements of mode converters for low-power excitation of gyrotron-type modes. International Journal of Electronics, 1997, 82, 107-116.	1.4	17
117	Conceptual design of a 42 GHz, 200 kW gyrotron operating in the TE5,2mode. International Journal of Electronics, 2000, 87, 709-723.	1.4	17
118	Electron cyclotron resonance heating and EC-current drive experiments at W7-AS, status at W7-X. Fusion Engineering and Design, 2001, 53, 365-375.	1.9	17
119	170 GHz, 2 MW Coaxial Cavity Gyrotron - investigation of the parasitic oscillations and efficiency of the RF-output system -*. , 2007, , .		17
120	Numerical Studies on the Influence of Cavity Thermal Expansion on the Performance of a High-Power Gyrotron. IEEE Transactions on Electron Devices, 2018, 65, 2308-2315.	3.0	17
121	The 118 GHz ECRH experiment on Tore Supra. Fusion Engineering and Design, 2001, 56-57, 605-609.	1.9	16
122	Gyro-devices and their applications. , 2011, , .		16
123	Generation of powerful narrow-band 75-GHz radiation in a free-electron maser with two-dimensional distributed feedback. Technical Physics Letters, 2013, 39, 801-804.	0.7	16
124	ECR Heating System for the Gas Dynamic Trap. Fusion Science and Technology, 2013, 63, 40-45.	1.1	16
125	Crystallization of lithium disilicate glass using high frequency microwave processing. Journal of the European Ceramic Society, 2015, 35, 2915-2922.	5.7	16
126	Exploring fusion-reactor physics with high-power electron cyclotron resonance heating on ASDEX Upgrade. Plasma Physics and Controlled Fusion, 2020, 62, 024012.	2.1	16

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127	Design of a high order volume mode cavity for a l MW/140GHz gyrotron. International Journal of Electronics, 1995, 78, 771-787.	1.4	15
128	Design of an ultra-broadband single-disk output window for a frequency step-tunable 1MW gyrotron. Fusion Engineering and Design, 2005, 74, 489-493.	1.9	15
129	Bragg Reflection Band Stop Filter for ECE on Wega. Journal of Infrared, Millimeter, and Terahertz Waves, 2011, 32, 1424-1433.	2.2	15
130	2 MW, 170 GHz coaxial-cavity short-pulse gyrotron - Investigations on electron beam instabilities and parasitic oscillations. , 2013, , .		15
131	Progress in the 10-MW ECRH System for the Stellarator W7-X. IEEE Transactions on Plasma Science, 2004, 32, 144-151.	1.3	14
132	Observation of the high-Q modes inside the resonance zone of two-dimensional Bragg structures. Applied Physics Letters, 2008, 92, .	3.3	14
133	Production of Powerful Spatially Coherent Radiation in Planar and Coaxial FEM Exploiting Two-Dimensional Distributed Feedback. IEEE Transactions on Plasma Science, 2009, 37, 1792-1800.	1.3	14
134	Transient Millimeter-Wave Signal Analysis With Unambiguous RF Spectrum Reconstruction. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 4660-4666.	4.6	14
135	Gyrotron development at KIT: FULGOR test facility and gyrotron concepts for DEMO. Fusion Engineering and Design, 2015, 96-97, 589-592.	1.9	14
136	Recent progress in the upgrade of the TCV EC-system with two 1MW/2s dual-frequency (84/126GHz) gyrotrons. EPJ Web of Conferences, 2017, 157, 03001.	0.3	14
137	Present developments and status of electron sources for high power gyrotron tubes and free electron masers. Applied Surface Science, 1997, 111, 106-120.	6.1	13
138	Development of reliable diamond window for EC launcher on fusion reactors. Fusion Engineering and Design, 2005, 74, 305-310.	1.9	13
139	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
140	Examination of parasitic after-cavity oscillations in the W7-X series gyrotron SN4R. , 2011, , .		13
141	ECRH on ASDEX Upgrade - System Status, Feed-Back Control, Plasma Physics Results -. EPJ Web of Conferences, 2012, 32, 02011.	0.3	13
142	ECRH and W7-X: An intriguing pair. AIP Conference Proceedings, 2014, , .	0.4	13
143	Recent experimental results of the European 1 MW, 170 GHz short-pulse gyrotron prototype for ITER. , 2015, , .		13
144	Study of Dynamic After Cavity Interaction in Gyrotronsâ€"Part I: Adiabatic Approximation. IEEE Transactions on Electron Devices, 2015, 62, 184-191.	3.0	13

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145	Development of high power window prototypes for ECH&CD launchers. Fusion Engineering and Design, 2007, 82, 693-699.	1.9	12
146	Study of Dynamic After Cavity Interaction in Gyrotronsâ€"Part II: Influence of a Nonuniform Magnetic Field. IEEE Transactions on Electron Devices, 2015, 62, 192-199.	3.0	12
147	Towards a 1.5 MW, 140 GHz gyrotron for the upgraded ECRH system at W7-X. Fusion Engineering and Design, 2021, 164, 112173.	1.9	12
148	Development of a 140 GHz, 1 MW, Continuous Wave Gyrotron for the W7-X Stellarator. Frequenz, 2001, 55, .	0.9	11
149	140GHz high-power gyrotron development for the stellarator W7-X. Fusion Engineering and Design, 2005, 74, 217-221.	1.9	11
150	Analysis of a ${m TE}_{22,6}$ 118-GHz Quasi-Optical Mode Converter. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 1697-1703.	4.6	11
151	Mechanism of azimuthal mode selection in two-dimensional coaxial Bragg resonators. Journal of Applied Physics, 2009, 105, .	2.5	11
152	Simulation and experimental investigations on dynamic after cavity interaction (ACI). , 2010, , .		11
153	Influence of Annular Beam Displacement on the Performance of a High-Power Gyrotron. IEEE Transactions on Plasma Science, 2013, 41, 872-878.	1.3	11
154	Effective Cavity Length of Gyrotrons. Journal of Infrared, Millimeter, and Terahertz Waves, 2014, 35, 1011-1017.	2.2	11
155	A New Method for Synthesis of Beam-Shaping Mirrors for Off-Axis Incident Gaussian Beams. IEEE Transactions on Plasma Science, 2014, 42, 1380-1384.	1.3	11
156	Recent experiments with the European 1MW, 170GHz industrial CW and short-pulse gyrotrons for ITER. Fusion Engineering and Design, 2019, 146, 349-352.	1.9	11
157	Large-orbit coaxial-structure cyclotron autoresonance maser. Applied Physics Letters, 2006, 88, 033514.	3.3	10
158	NEW FREQUENCY STEP-TUNABLE ECRH SYSTEM FOR ASDEX UPGRADE. Journal of Infrared, Millimeter and Terahertz Waves, 2007, 27, 173-182.	0.6	10
159	History, presence and future of gyrotrons. , 2009, , .		10
160	Design and 3-D Simulations of a 10-kW/28-GHz Gyrotron With a Segmented Emitter Based on Controlled Porosity-Reservoir Cathodes. IEEE Transactions on Plasma Science, 2013, 41, 2717-2723.	1.3	10
161	Influence of emitter surface roughness on high power fusion gyrotron operation. Nuclear Fusion, 2016, 56, 026002.	3.5	10
162	Excitation of higher radial modes of azimuthal surface waves in the electron cyclotron frequency range by rotating relativistic flow of electrons in cylindrical waveguides partially filled by plasmas. Physics of Plasmas, 2018, 25, 052109.	1.9	10

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163	Diamond Window Technology for Electron Cyclotron Heating and Current Drive: State of the Art. Fusion Science and Technology, 2019, 75, 719-729.	1.1	10
164	Gyrotron multistage depressed collector based on E Ã— B drift concept using azimuthal electric field. II: Upgraded designs. Physics of Plasmas, 2019, 26, .	1.9	10
165	Triode magnetron injection gun for the KIT 2 MW 170 GHz coaxial cavity gyrotron. Physics of Plasmas, 2020, 27, .	1.9	10
166	Generation of 1.5 MWâ€“140 GHz Pulses With the Modular Pre-Prototype Gyrotron for W7-X. IEEE Electron Device Letters, 2021, 42, 939-942.	3.9	10
167	Experimental Testing of the European TH1509U 170-GHz 1-MW CW Industrial Gyrotronâ€”Long Pulse Operation. IEEE Electron Device Letters, 2022, 43, 623-626.	3.9	10
168	The 118-GHz Electron Cyclotron Heating System on Tore Supra. Fusion Science and Technology, 2009, 56, 1205-1218.	1.1	9
169	Multi-frequency operation of DEMO gyrotron with realistic electron beam parameters. , 2015, , .		9
170	Self-consistent modeling of terahertz waveguide and cavity with frequency-dependent conductivity. Physics of Plasmas, 2015, 22, .	1.9	9
171	Manufacturing and tests of the European 1 MW, 170 GHz CW gyrotron prototype for ITER. , 2016, , .		9
172	Evaluation and Influence of Gyrotron Cathode Emission Inhomogeneity. IEEE Transactions on Electron Devices, 2017, 64, 1315-1322.	3.0	9
173	Tolerance Studies on an Inverse Magnetron Injection Gun for a 2-MW 170-GHz Coaxial-Cavity Gyrotron. IEEE Transactions on Electron Devices, 2017, 64, 3870-3876.	3.0	9
174	Comparison between controlled non-adiabatic and EÃ—B concepts for gyrotron multistage depressed collectors. EPJ Web of Conferences, 2017, 149, 04005.	0.3	9
175	Multiphysics Modeling of Insert Cooling System for a 170-GHz, 2-MW Long-Pulse Coaxial-Cavity Gyrotron. IEEE Transactions on Electron Devices, 2019, 66, 4008-4015.	3.0	9
176	Computer-Controlled Test System for the Excitation of Very High-Order Modes in Highly Oversized Waveguides. Journal of Infrared, Millimeter, and Terahertz Waves, 2019, 40, 257-268.	2.2	9
177	Towards large area CVD diamond disks for Brewster-angle windows. Fusion Engineering and Design, 2020, 157, 111818.	1.9	9
178	Mode generator for the cold test of step-tunable gyrotrons. , 0, , .		8
179	Title is missing!. Journal of Infrared, Millimeter and Terahertz Waves, 2002, 23, 973-980.	0.6	8
180	Investigations on parasitic oscillations in megawatt gyrotrons. , 2009, , .		8

#	Article	IF	Citations
181	Interaction circuit design and RF behavior of a 236 GHz gyrotron for DEMO. , 2015, , .		8
182	Manufacturing and Test of the 1 MW Long-Pulse 84/126 GHz Dual-Frequency Gyrotron for TCV. , 2019, , .		8
183	New trends of gyrotron development at KIT: An overview on recent investigations. Fusion Engineering and Design, 2019, 146, 341-344.	1.9	8
184	Design of a Quasi-Optical Mode Converter for a Frequency Step-Tunable Gyrotron. Journal of Infrared, Millimeter and Terahertz Waves, 2003, 24, 1599-1608.	0.6	7
185	EC power sources: European technological developments towards ITER. Fusion Engineering and Design, 2007, 82, 619-626.	1.9	7
186	High-Efficiency Quasi-Optical Mode Converter for the Coaxial Cavity Gyrotron. Fusion Science and Technology, 2011, 59, 742-748.	1.1	7
187	Design of the EU-1MW gyrotron for ITER. , 2013, , .		7
188	Recent achievements on tests of series gyrotrons for W7-X and planned extension at the KIT gyrotron test facility. Fusion Engineering and Design, 2013, 88, 945-949.	1.9	7
189	High power ECRH and ECCD in moderately collisional ASDEX Upgrade Hmodes and status of EC system upgrade. EPJ Web of Conferences, 2015, 87, 02004.	0.3	7
190	Preliminary studies on Multistage Depressed Collectors for fusion gyrotrons. , 2016, , .		7
191	Theoretical investigation on possible operation of a 140 GHz 1 MW gyrotron at 175 GHz for CTS plasma diagnostics at W7-X. Physics of Plasmas, 2020, 27, .	1.9	7
192	Mode Discrimination by Lossy Dielectric Rods in Cavities of Second-Harmonic Gyrotrons. Journal of Infrared, Millimeter, and Terahertz Waves, 2021, 42, 93-105.	2.2	7
193	Status and High Power Performance of the 10-MW 140-GHz ECH System for the Stellarator Wendelstein 7-X. Plasma and Fusion Research, 2010, 5, S1006-S1006.	0.7	7
194	Recent development of high power gyrotrons and windows for EC wave applications. , 1997, , .		6
195	The Influence of Window Parameters on the Transmission Characteristics of Millimeter Waves. Journal of Infrared, Millimeter and Terahertz Waves, 2003, 24, 1805-1813.	0.6	6
196	A CVD-Diamond Disk Brewster Window for a Frequency Step-Tunable 1 MW Gyrotron. Journal of Infrared, Millimeter and Terahertz Waves, 2003, 24, 2017-2024.	0.6	6
197	Experimental results on high-power gyrotrons for the stellarator W7-X. , 2007, , .		6
198	140 GHz, 1 MW, CW gyrotron development for the ECRH system of the stellarator Wendelstein 7-X. , 2011, , .		6

#	Article	IF	Citations
199	Development of Mode Conversion Waveguides at KIT. EPJ Web of Conferences, 2015, 87, 04003.	0.3	6
200	Magnetron injection gun for a 238 GHz 2 MW coaxial-cavity gyrotron. , 2015, , .		6
201	Proposal of an inverse magnetron injection gun for future hollow-cylindrical-cavity high power gyrotrons. , 2016, , .		6
202	Direct Voltage Depression Calculation of Arbitrary Electron Beams in Misaligned Coaxial Gyrotron Cavities. IEEE Transactions on Electron Devices, 2016, 63, 3740-3746.	3.0	6
203	Excitation of Azimuthal Surface Waves Above the Upper-Hybrid Frequency by External Relativistic Flows of Electrons in Coaxial Plasma-Vacuum Waveguide. IEEE Transactions on Plasma Science, 2016, 44, 2859-2866.	1.3	6
204	Novel multistage depressed collector for high power fusion gyrotrons based on an EÃ—B drift concept. , 2017, , .		6
205	RF Behavior of a 220/251.5-GHz, 2-MW, Triangular Corrugated Coaxial Cavity Gyrotron. IEEE Transactions on Electron Devices, 2017, 64, 4287-4294.	3.0	6
206	KIT coaxial gyrotron development: From ITER towards DEMO. , 2017, , .		6
207	Development and First Operation of the 170 GHz, 2 MW Longer-Pulse Coaxial-Cavity Modular Gyrotron Prototype at KIT. , 2018, , .		6
208	Studies towards an upgraded 1.5 MW gyrotron for W7-X. EPJ Web of Conferences, 2019, 203, 04003.	0.3	6
209	Overview on recent progress in magnetron injection gun theory and design for high power gyrotrons. EPJ Web of Conferences, 2019, 203, 04011.	0.3	6
210	Coaxial multistage depressed collector design for high power gyrotrons based on EÃ—B concept. Physics of Plasmas, 2019, 26, .	1.9	6
211	Design Studies of a 3-MW, Multifrequency (170/204/236 GHz) DEMO Class Triangular Corrugated Coaxial Cavity Gyrotron. IEEE Transactions on Electron Devices, 2019, 66, 702-708.	3.0	6
212	Collective Thomson Scattering Diagnostic for Wendelstein 7-X at 175 GHz. Journal of Instrumentation, 2020, 15, C05035-C05035.	1.2	6
213	A Compact Two-Frequency Notch Filter for Millimeter Wave Plasma Diagnostics. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 741-749.	2.2	6
214	Large Power Increase Enabled by High-Q Diamond-Loaded Cavities for Terahertz Gyrotrons. Journal of Infrared, Millimeter, and Terahertz Waves, 2021, 42, 863-877.	2.2	6
215	Progress in the development of high-power millimeter- and submillimeter wave gyrotrons and of free electron masers. Archiv Fuer Elektrotechnik, 1993, 77, 51-55.	0.1	5
216	Very long pulse testing of the TH 1506 B 118 GHz gyrotron. AIP Conference Proceedings, 2001, , .	0.4	5

#	Article	IF	Citations
217	Progress of the 1 MW, 140 GHz, CW gyrotron for W7-X. , 0, , .		5
218	Further design steps towards a 4 MW 170 GHz coaxial-cavity gyrotron. , 2009, , .		5
219	Mode selection and resonator design for DEMO gyrotrons. , 2014, , .		5
220	Status of Europeâ€™s contribution to the ITER EC system. EPJ Web of Conferences, 2015, 87, 04004.	0.3	5
221	A Multifrequency Notch Filter for Millimeter Wave Plasma Diagnostics based on Photonic Bandgaps in Corrugated Circular Waveguides. EPJ Web of Conferences, 2015, 87, 04012.	0.3	5
222	Multi-frequency design of a 2 MW coaxial-cavity gyrotron for DEMO. , 2015, , .		5
223	A design proposal for an optimized inverse Magnetron Injection Gun for the KIT 2 MW / 170 GHz modular coaxial cavity gyrotron. , 2015, , .		5
224	Excitation of azimuthal surface waves in the electron cyclotron frequency range by a rotating electron beam in presence of dissipation. Physics of Plasmas, 2016, 23, 122124.	1.9	5
225	Excitation of Electromagnetic Waves Above the Upper-Hybrid Frequency by Internal Gyrating Electron Beam in a Coaxial Waveguide. IEEE Transactions on Plasma Science, 2017, 45, 623-630.	1.3	5
226	Numerical studies on the influence of cavity thermal expansion on the performance of a high-power gyrotron. , 2017, , .		5
227	First CW experiments with the EU ITER 1 MW, 170 GHz industrial prototype gyrotron. , 2017, , .		5
228	Extension of the multi-frequency ECRH system at ASDEX upgrade. EPJ Web of Conferences, 2017, 149, 03004.	0.3	5
229	Higher radial modes of azimuthal surface waves in magnetoactive cylindrical plasma waveguides. Journal of Plasma Physics, 2018, 84, .	2.1	5
230	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
231	Automated mode recovery for gyrotrons demonstrated at Wendelstein 7-X. Fusion Engineering and Design, 2019, 148, 111258.	1.9	5
232	THALES TH1507 140 GHz 1 MW CW Gyrotron for W7-X Stellarator. , 2019, , .		5
233	Report of recent experiments with the European 1 MW, 170 GHz CW and SP prototype gyrotrons for ITER. EPJ Web of Conferences, 2019, 203, 04006.	0.3	5
234	Electromagnetic energy rotation along plasma-metal interface in cylindrical waveguides initiated by azimuthal surface waves. Physics of Plasmas, 2019, 26, .	1.9	5

#	Article	IF	Citations
235	Starting currents of modes in cylindrical cavities with mode-converting corrugations for second-harmonic gyrotrons. Journal of Infrared, Millimeter, and Terahertz Waves, 2021, 42, 260-274.	2.2	5
236	Multifaceted Simulations Reproducing Experimental Results From the 1.5-MW 140-GHz Preprototype Gyrotron for W7-X. IEEE Transactions on Electron Devices, 2021, 68, 3063-3069.	3.0	5
237	Gyro-devices â€“ natural sources of high-power high-order angular momentum millimeter-wave beams. Terahertz Science & Technology, 2020, 13, 1-21.	0.5	5
238	Development of Advanced High Power Gyrotrons at Forschungszentrum Karlsruhe. Frequenz, 2001, 55, .	0.9	4
239	Design of a multifrequency high power gyrotron at FZK. , 0, , .		4
240	Extended operation of the 1 MW, CW gyrotrons for W7-X. , 2007, , .		4
241	CONCEPTUAL DESIGN STUDIES OF AN 84 GHz, 500 kW, CW GYROTRON. Journal of Infrared, Millimeter and Terahertz Waves, 2007, 27, 657-670.	0.6	4
242	Major progress in the development of the 2 MW coaxial-cavity gyrotron for ITER. , 2009, , .		4
243	Past and future upgrades of the gyrotron high voltage cathode power supplies at the Forschungszentrum Karlsruhe. Fusion Engineering and Design, 2009, 84, 1734-1738.	1.9	4
244	170 GHz, 2 MW coaxial cavity gyrotron for ITER - recent results obtained with a short pulse tube -. , 2009, , .		4
245	2 MW Coaxial-Cavity Pre-Prototype Gyrotron for ITER - recent experiments with the modified gyrotron setup -. , 2012, , .		4
246	First operation of a D-band megawatt gyrotron with elliptically brazed diamond window. , 2013, , .		4
247	Development of Advanced Gyrotrons in Europe. Fusion Science and Technology, 2013, 64, 505-512.	1.1	4
248	Determination of Effective Constitutive Properties of Metal Powders at 2.45 GHz for Microwave Processing Applications. Frequenz, 2014, 68, .	0.9	4
249	An Improved Broadband Boundary Condition for the RF Field in Gyrotron Interaction Modeling. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 2459-2467.	4.6	4
250	RF Behavior and Launcher Design for a Fast Frequency Step-tunable 236â€†GHz Gyrotron for DEMO. Frequenz, 2017, 71, .	0.9	4
251	Investigation on mm-wave sintering of metal powder compacts using in-situ dilatometry and electrical resistivity measurements. EPJ Web of Conferences, 2017, 149, 02007.	0.3	4
252	The gyrotron â€“ a natural source of high-power orbital angular momentum millimeter-wave beams. EPJ Web of Conferences, 2017, 149, 04014.	0.3	4

#	Article	IF	Citations
253	The EC-system of EU DEMO: concepts for a reactor heating system. EPJ Web of Conferences, 2017, 149, 03003.	0.3	4
254	Numerical Investigation on Spent Beam Deceleration Schemes for Depressed Collector of a High-Power Gyrotron. IEEE Transactions on Electron Devices, 2018, 65, 2321-2326.	3.0	4
255	Study on After Cavity Interaction in a 140-GHz Model TE_{0,3}Gyrotron Using 3-D CFDTD PIC Simulation. IEEE Transactions on Plasma Science, 2018, 46, 1937-1942.	1.3	4
256	Theoretical Study on the Operation of the EU/KIT TE34,19-Mode Coaxial-Cavity Gyrotron at 170/204/238 GHz. EPJ Web of Conferences, 2019, 203, 04014.	0.3	4
257	Electromagnetic energy rotation along plasma-dielectric interface caused by azimuthal surface waves in isotropic cylindrical metallic waveguide. Physics of Plasmas, 2019, 26, 122104.	1.9	4
258	Large Area Diamond Disk Growth Experiments and Thermomechanical Investigations for the Broadband Brewster Window in DEMO. IEEE Transactions on Electron Devices, 2021, 68, 4669-4674.	3.0	4
259	Improvement of the Output Mode Purity of a Complex-Cavity Resonator for a Frequency-Tunable Sub-THz Gyrotron. IEEE Transactions on Electron Devices, 2021, 68, 5220-5226.	3.0	4
260	Realistic Design Studies on a 300-GHz, 1-MW, DEMO-Class Conventional-Cavity Gyrotron. IEEE Transactions on Electron Devices, 2022, 69, 1442-1450.	3.0	4
261	Surface Flute Waves in Plasmas. Springer Series on Atomic, Optical, and Plasma Physics, 2022, , .	0.2	4
262	New Type of Sub-THz Frequency-Doubling Gyro-TWT With Helically Corrugated Circuit. IEEE Electron Device Letters, 2022, 43, 1347-1350.	3.9	4
263	A double disk window for the JET EP ECRH system. Fusion Engineering and Design, 2003, 66-68, 633-637.	1.9	3
264	Improvement of Gyrotron Beam Quality by Suppression of Parasitic Low-Frequency Oscillations. , 2006, , .		3
265	Low power mm-wave transmission characteristics of a frequency tuneable double disk CVD-diamond window. , 2007, , .		3
266	Multi-frequency ECRH at ASDEX Upgrade, status and plans. , 2010, , .		3
267	2.1: Experiments with the European 2 MW coaxial-cavity pre-prototype gyrotron for ITER. , 2010, , .		3
268	Mode selection and resonator design studies of a 95 GHz, 100 KW, CW Gyrotron. , 2011, , .		3
269	Progress on 140 GHz, 1 MW, CW series gyrotrons for W7-X. , 2012, , .		3
270	KIT gyrotron development for future fusion applications. , 2013, , .		3

#	Article	IF	Citations
271	Modelling and simulation of gyrotrons for ITER. Journal of Physics: Conference Series, 2014, 516, 012028.	0.4	3
272	Development of advanced gyrotrons. , 2014, , .		3
273	Self-consistent modeling of terahertz waveguide and cavity with frequency-dependent conductivity. , 2015, , .		3
274	Observation of Discrete Frequency Hopping in MW-Class Gyrotrons During Long-Pulse Operation. IEEE Transactions on Electron Devices, 2015, 62, 3049-3055.	3.0	3
275	Gyrotronâ€Forschung und â€Entwicklung am KIT. Vakuum in Forschung Und Praxis, 2016, 28, 21-27.	0.1	3
276	Status and experimental results of the European 1 MW, 170 GHz industrial CW prototype Gyrotron for ITER. , 2016, , .		3
277	3D Simulation of a realistic Multistage Depressed Collector for high-power fusion gyrotrons. , 2016, , .		3
278	A fast frequency step-tunable 236 GHz gyrotron design for DEMO. , 2016, , .		3
279	Study of the Influence of Stray Magnetic Fields on the Operation of the European Gyrotron for ITER. IEEE Transactions on Electron Devices, 2017, 64, 3421-3428.	3.0	3
280	Design and manufacturing process for the KIT 2-MW 170-GHz coaxial-cavity longer-pulse gyrotron. EPJ Web of Conferences, 2017, 149, 04015.	0.3	3
281	Simulation of electromagnetic fields scattered from arbitrary shaped electric conductors. EPJ Web of Conferences, 2017, 149, 04016.	0.3	3
282	Investigation on misalignment tolerances of 240-GHz DEMO gyrotrons. , 2017, , .		3
283	Developments of fusion gyrotrons for W7-X, ITER and EU DEMO: Ongoing activities and future plans of KIT. , 2017, , .		3
284	European research activities towards a future DEMO gyrotron. EPJ Web of Conferences, 2017, 149, 04007.	0.3	3
285	KIT in-house manufacturing and first operation of a 170 GHz 2 MW longer-pulse coaxial-cavity pre-prototype gyrotron. , 2018, , .		3
286	2018 Status on KIT Gyrotron Activities. EPJ Web of Conferences, 2018, 187, 01009.	0.3	3
287	Current Status of the KIT Coaxial-Cavity Long-Pulse Gyrotron and its Key Components. EPJ Web of Conferences, 2018, 187, 01028.	0.3	3
288	Recent Status and Future Prospects of Coaxial-Cavity Gyrotron Development at KIT. EPJ Web of Conferences, 2019, 203, 04005.	0.3	3

#	Article	IF	Citations
289	Megawatt power generation of the dual-frequency gyrotron for TCV at 84 and 126â€...GHz, in long pulses. AIP Conference Proceedings, 2020, , .	0.4	3
290	Azimuthal surface waves in cylindrical metal waveguides partially filled by magnetoactive plasma: Analysis of energy transfer. Physics of Plasmas, 2020, 27, .	1.9	3
291	Design verification of the gyrotron diamond output window for the upgrade of the ECRH system at W7-X. Fusion Engineering and Design, 2021, 165, 112262.	1.9	3
292	QUASI-OPTICAL MODE CONVERTERS IN ADVANCED HIGH-POWER GYROTRONS FOR NUCLEAR FUSION PLASMA HEATING. NATO Science Series Series II, Mathematics, Physics and Chemistry, 2005, , 325-351.	0.1	3
293	Investigations on W-Band Second Harmonic Gyrotron for 50/100-kW Operation. IEEE Transactions on Plasma Science, 2020, 48, 4127-4133.	1.3	3
294	Investigations on RF Behavior of a V-Band Second Harmonic Gyrotron for 100/200 kW Operation. IEEE Transactions on Plasma Science, 2022, 50, 222-228.	1.3	3
295	Progress in Development of the 170 GHz, 2MW Coaxial Cavity Gyrotron for ITER. , 2006, , .		2
296	Matching the output beam of a multi-frequency gyrotron to a Brewster window with small aperture. , 2007, , .		2
297	Experimental observation of high-Q modes at the center of a resonance band of two-dimensional Bragg structures. Technical Physics Letters, 2007, 33, 117-121.	0.7	2
298	Recent experimental results on the 170 GHz, 2 MW coaxial cavity pre-prototype gyrotron for ITER. , 2008, , .		2
299	Characterization of windows for fusion applications using a d-band network analyzer. , 2008, , .		2
300	2.4: Investigations on parasitic oscillations in megawatt gyrotrons. , 2010, , .		2
301	Status of 1 MW, 140 GHz series gyrotrons for W7-X. , 2011, , .		2
302	High power gyrotron development at KIT for ECH&CD of fusion plasmas. , 2012, , .		2
303	Operation of a step-frequency tunable gyrotron with a diamond Brewster angle output window. , 2013, , .		2
304	Separation of thermal expansion and beam charge neutralization effects in high power 140 GHz CW gyrotrons. , 2014, , .		2
305	From W7-X towards ITER and beyond: Status and progress in EU fusion gyrotron developments. , 2015, , .		2
306	Investigation on mode eigenvalue limits for stable 236 GHz, 1 MW-class gyrotron operation. , 2016, , .		2

#	Article	IF	Citations
307	Beam-plasma system as a source of powerful submillimeter and terahertz radiation (experimental and) Tj ETQq1 1 0.784314 rgBT /Ov	0.4	2
308	Progress on the upgrade of the TCV EC-system with two 1MW dual-frequency gyrotrons. , 2016, , .		2
309	Choice of material composition for a high-performance inverted Magnetron Injection Gun. , 2016, , .		2
310	Transition Between Beam-Plasma and Beam-Dissipative Instability Regimes in the Interaction of Relativistic Large Larmor Orbit Electron Beams and Azimuthal Surface Waves Above the Upper-Hybrid Frequency in Coaxial Plasma Waveguides. IEEE Transactions on Plasma Science, 2017, 45, 2208-2214.	1.3	2
311	Experimental Results of the EU ITER Prototype Gyrotrons. EPJ Web of Conferences, 2017, 157, 03016.	0.3	2
312	Measurements of satellite modes in 140 GHz wendelstein 7-X gyrotrons: An approach to an electronic stability control. , 2017, , .		2
313	Considerations on the selection of operating modes for future coaxial-cavity gyrotrons for DEMO. , 2018, , .		2
314	Mode competition control using triode-type start-up scenario for a 236 GHz gyrotron for DEMO. , 2018, , .		2
315	2018 Status of the Measurement Capabilities for Fusion Gyrotrons at KIT/IHM. EPJ Web of Conferences, 2018, 187, 01019.	0.3	2
316	Towards Fully Automated Systems for the Generation of Very High Order Modes in Oversized Waveguides. EPJ Web of Conferences, 2018, 195, 01030.	0.3	2
317	Influence of Electron Beam Misalignment on the Performance of a 0.24 THz, 1.5 MW Hollow-Cavity Gyrotron Design for DEMO. , 2018, , .		2
318	Two mechanisms of resonance overlapping in excitation of azimuthal surface waves by rotating relativistic electron beams. Physics of Plasmas, 2018, 25, 052111.	1.9	2
319	GDS2H - V.2018: A Comprehensive Computer Code Package for the Design of Second Harmonic Gyrotrons. , 2019, , .		2
320	From W7-X Towards ITER and Beyond: 2019 Status on EU Fusion Gyrotron Developments. , 2019, , .		2
321	Design Studies of Mini-Channel Cavity Cooling for a 170 GHz, 2 MW Coaxial-Cavity Gyrotron. , 2019, , .		2
322	Metrology techniques for the verification of the alignment of the EU gyrotron prototype for ITER. EPJ Web of Conferences, 2019, 203, 04015.	0.3	2
323	Electromagnetic energy rotation by azimuthal surface waves along plasma-metal interface around a cylindrical metallic rod placed into infinite magnetized plasma. Physics of Plasmas, 2019, 26, 052103.	1.9	2
324	Surface Electron Cyclotron Waves in Plasmas. Springer Series on Atomic, Optical, and Plasma Physics, 2019, , .	0.2	2

#	Article	IF	Citations
325	Initial stage of interaction between gyrating relativistic electron beam and long-wavelength electromagnetic surface waves in cylindrical metallic waveguides partially filled with plasma. Physics of Plasmas, 2019, 26, .	1.9	2
326	Zeroth radial modes of azimuthal surface waves in dense plasma-loaded, coaxial helix traveling-wave-tube-like waveguides. Physics of Plasmas, 2021, 28, 043106.	1.9	2
327	CONCEPTUAL STUDY OF MULTI-MEGAWATT MILLIMETRE-WAVE TRANSMISSION AND ANTENNA SYSTEMS FOR ELECTRON CYCLOTRON WAVE APPLICATIONS IN NET / ITER. , 1991, , 238-242.		2
328	Frequency Stabilization of Megawatt-Class 140 GHz Gyrotrons at W7-X Using an Off-the-Shelf PLL System. , 2021, , .		2
329	Basic design considerations for a frequency step-tunable electron cyclotron wave system to suppress NTMs in DEMO. Fusion Engineering and Design, 2021, 173, 112931.	1.9	2
330	Frequency and mode measurement techniques for megawatt-class gyrotrons. TM Technisches Messen, 2022, 89, 85-96.	0.7	2
331	Time-Domain Simulation of Helical Gyro-TWTs With Coupled Modes Method and 3-D Particle Beam. IEEE Transactions on Electron Devices, 2022, 69, 4546-4552.	3.0	2
332	The cooling system for the 10 MW, 140 GHz, CW ECRH installation on Wendelstein 7-X. Fusion Engineering and Design, 2001, 56-57, 627-632.	1.9	1
333	Status of the Series Production of 1-MW, 140-GHz, CW Gyrotrons for W7-X. , 2006, , .		1
334	Upgrade Of The TH1506B 118 GHz Gyrotron Using Modeing Tools. AIP Conference Proceedings, 2007, , .	0.4	1
335	Advanced quasi-optical mode converter for a multi-frequency gyrotron. , 2008, , .		1
336	170 GHz, 2 MW coaxial cavity gyrotron - experimental investigations on the pre-prototype tube -. , 2008, , .		1
337	Status of development of the 2MW, 170GHz coaxial-cavity gyrotron for ITER. , 2008, , .		1
338	Multi-frequency ECRH system at ASDEX upgrade. , 2009, , .		1
339	An overview of the ITER electron cyclotron H&CD system. , 2009, , .		1
340	140 GHz, 1 MW CW gyrotron development for the ECH system of the stellarator W7-X. , 2010, , .		1
341	2.5: Design of major components for a 4 MW 170 GHz coaxial-cavity gyrotron. , 2010, , .		1
342	Status of experiments with the 2 MW coaxial-cavity pre-prototype gyrotron for ITER. , 2011, , .		1

#	Article	IF	Citations
343	High selective two-dimensional Bragg resonators of planar geometry: Theoretical, computational, and experimental study. Journal of Applied Physics, 2012, 112, 114504.	2.5	1
344	Simulations of high power gyrotron operation during window Arc. , 2013, , .		1
345	Operation and upgrade of the ECRH system at ASDEX upgrade. , 2014, , .		1
346	Effective cavity length of high-power gyrotrons. , 2014, , .		1
347	Evaluation of gyrotron cathode emission inhomogeneity from current-voltage characteristics. , 2015, , .		1
348	Sub-THz notch filters based on photonic bandgaps in overmoded waveguides. , 2015, , .		1
349	Extension of the multi-frequency ECRH system at ASDEX upgrade. , 2016, , .		1
350	A megawatt-class 220 GHz conventional cavity gyrotron. , 2016, , .		1
351	Development of an advanced vector analysis code for simulation of electromagnetic fields in quasi-optical systems of high power gyrotrons. , 2017, , .		1
352	Experimental study on further performance optimization of the European 1 MW, 170 GHz gyrotron prototype for ITER. , 2017, , .		1
353	Quasi-optical mode converter for 1MW dual-frequency gyrotrons. , 2017, , .		1
354	Design of E Ã— B multistage depressed collector concepts for high-power fusion gyrotrons. , 2017, , .		1
355	Powerful multichannel planar FEMs based on intense parallel sheet beams. , 2017, , .		1
356	Commissioning of the extended multi-frequency ECRH system at ASDEX upgrade. , 2017, , .		1
357	Overview of recent theoretical studies on ExB multistage depressed collector designs for gyrotrons. , 2017, , .		1
358	Recent Trends in Fusion Gyrotron Development at KIT. EPJ Web of Conferences, 2017, 157, 03017.	0.3	1
359	Benefits of advanced full-wave vector analysis codes for the design of high-power microwave tubes. , 2018, , .		1
360	Progress in the development of a multistage depressed collector system for high power gyrotrons. , 2018, , .		1

#	Article	IF	Citations
361	Performance analysis of an insert cooling system for long-pulse operation of a coaxial-cavity gyrotron. , 2018, , .		1
362	Operating the KIT 170 GHz 2 MW Coaxial-Cavity Gyrotron at 204 GHz: Performance Expectations and First Cold Test of the Quasi-Optical System. , 2019, , .		1
363	Design of a Quasi-Optical Mode Converter for a Dual-Frequency Coaxial-Cavity Gyrotron. , 2019, , .		1
364	DEMO-Relevant Gyrotron Research at KIT. , 2019, , .		1
365	Completion of the 8 MW Multi-Frequency ECRH System at ASDEX Upgrade. , 2019, , .		1
366	Towards Advanced Fusion Gyrotrons: 2018 Update on Activities within EUROfusion. EPJ Web of Conferences, 2019, 203, 04007.	0.3	1
367	Improved Simulation of Quasi-Optical Launchers for High Power Gyrotrons with Smoothing Algorithm. EPJ Web of Conferences, 2019, 203, 04008.	0.3	1
368	Operations with spherical calorimetric loads in different configurations at gyrotron test stands at EPFL and QST. AIP Conference Proceedings, 2020, , .	0.4	1
369	Extended Feedback System for Coupled Sub-THz Gyro-Devices to Provide New Regimes of Operation. IEEE Transactions on Electron Devices, 2020, 67, 5729-5735.	3.0	1
370	Rotation of electromagnetic energy initiated by azimuthal surface waves in coaxial metal waveguides entirely filled by plasma. Physics of Plasmas, 2020, 27, .	1.9	1
371	Calculations on Mode Eigenvalues in a Corrugated Waveguide with Varying Diameter and Corrugation Depth. Journal of Infrared, Millimeter, and Terahertz Waves, 2021, 42, 493-503.	2.2	1
372	AZIMUTHAL SURFACE WAVES IN LOW-DENSITY PLASMA LOADED, COAXIAL HELIX TRAVELING-WAVE-TUBE-LIKE WAVEGUIDES. , 2021, , 24-29.		1
373	Development of High Power 140 GHz Gyrotrons at KfK for Applications in Fusion. , 1993, , 618-622.		1
374	RF behavior of a 220/251.5 GHz, 2MW, triangular corrugated coaxial cavity gyrotron extended to the third operating frequency 283 GHz. , 2018, , .		1
375	Microstructured Quasi-Optical Selective Components for Subterahertz and Terahertz Applications. Vestnik Novosibirskogo Gosudarstvennogo Universiteta SeriÃ¢: Fizika, 2010, 5, 79-90.	0.1	1
376	Mechanical Design Study for Gyrotron EÃ—B Drift Two-Stage Depressed Collector. , 2020, , .		1
377	Recent Development of a 1.5 MW, 140 GHz Continuous-Wave Gyrotron for the Upgraded ECRH System at W7-X. , 2020, , .		1
378	Theoretical Study on the Possibility for Stepwise Tuning of the Frequency of the KIT 2 MW 170/204 GHz Coaxial-Cavity Gyrotron. , 2020, , .		1

#	Article	IF	Citations
379	Performance Expectation and Preparation of the First Experimental Campaign of the KIT 2 MW 170/204 GHz Coaxial-Cavity Gyrotron. , 2021, , .		1
380	Mechanical Design of the Short Pulse EÃ—B Drift Two-Stage Depressed Collector Prototype for High Power Gyrotron. , 2021, , .		1
381	Design of a High-Q Diamond-Loaded Cavity for a Third-Harmonic Subterahertz Gyrotron Driven by a Low-Power Electron Beam. IEEE Transactions on Electron Devices, 2022, 69, 3386-3392.	3.0	1
382	Eigenfrequency of a 140 GHz/1.5 MW coaxial-cavity gyrotron oscillator with structural misalignment taken into account. , 0, , .		0
383	CVD diamond disks and shells for nuclear fusion experiments. , 2008, , .		0
384	Study of two-dimensional periodic surface lattices for high-power mm and sub-mm wave Cherenkov devices. , 2011, , .		0
385	Progress on the development of the EU-1 MW gyrotron for ITER. , 2014, , .		0
386	Spectral dynamics of MM-radiation from two-channel planar FEM with two dimensional distributed feedback. , 2014, , .		0
387	Quasi-optical components for microwave control and remote sensing. , 2014, , .		0
388	Spectral dynamics of mm-wave radiation from two-channel planar FEM with two dimensional distributed feedback. , 2014, , .		0
389	A hybrid-type 170 GHz gyrotron launcher for the TE<inf>32,9</inf> mode. , 2015, , .		0
390	Efficient frequency step-tunable megawatt-class D-band gyrotron. , 2015, , .		0
391	Discrete frequency hopping in long-pulse high-power gyrotrons. , 2015, , .		0
392	Impact of emitter ring manufacturing tolerances on electron beam quality in high power gyrotrons. , 2016, , .		0
393	Instability of surface electron cyclotron TM-modes influenced by non-monochromatic alternating electric field. Physics of Plasmas, 2016, 23, 062106.	1.9	0
394	Validation of conformal finite difference time domain method for accurate higher order mode simulations. , 2016, , .		0
395	Orbital angular momentum of gyrotron modes. , 2017, , .		0
396	Powerful multichannel schemes of spatially-extended planar FEMs operated with two-dimensional distributed feedback. , 2017, , .		0

#	Article	IF	Citations
397	Study on the after cavity interaction in a 140 GHz model TE0,3 gyrotron using 3D CFDTD PIC simulations. , 2017, , .		0
398	Towards an 2 MW long-pulse coaxial-cavity gyrotron: Progress on the advanced KIT inverse magnetron injection gun. , 2017, , .		0
399	Magnetron Injection Gun for the 2 MW 170 GHz Modular Coaxial Cavity Gyrotron. , 2018, , .		0
400	Thirty Joint Russian-German Meetings on ECRH and Gyrotrons - A Retrospect -. EPJ Web of Conferences, 2018, 187, 01020.	0.3	0
401	Overview of Recent Gyrotron R&D at KIT in View of the EU DEMO. , 2018, , .		0
402	The Multi-Frequency ECRH System at ASDEX Upgrade - Current Status and Plans -. , 2018, , .		0
403	Contributions to the Joint DFG-RSF Project - Generation of Ultra-Short Microwave Pulses -. EPJ Web of Conferences, 2018, 187, 01027.	0.3	0
404	Design studies of a magnetron injection gun for a 2MW, multi-frequency (220/251.5/283 GHz) triangular corrugated coaxial cavity gyrotron. , 2018, , .		0
405	Investigation of a Mini-Channel Cavity Cooling Concept for a 170 GHz, 2 MW Coaxial-Cavity Gyrotron. , 2019, , .		0
406	Automated Generation of High-Order Modes for Tests of Quasi-Optical Systems of Gyrotrons for W7-X Stellarator. , 2019, , .		0
407	Theoretical Investigation on Injection Locking of the EU 170 GHz 2 MW TE34,19-Mode Coaxial-Cavity Gyrotron. , 2021, , .		0
408	Two-Frequency Notch Filters for Sub-THz Plasma Diagnostics. , 2021, , .		0
409	Improvement of the Power Handling Capability of the Upgraded Multi-Frequency ECRH System at ASDEX Upgrade. , 2020, , .		0
410	Design Studies on 0.3- THz, 0.5-MW Conventional Cavity Gyrotron for Plasma Heating. , 2021, , .		0