

# Ioannis Gr Pagonakis

## List of Publications by Year in descending order

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docs citations

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times ranked

466  
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Status and future development of Heating and Current Drive for the EU DEMO. Fusion Engineering and Design, 2022, 180, 113159.	1.9	22
3	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
4	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
5	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
6	Performance Expectation and Preparation of the First Experimental Campaign of the KIT 2 MW 170/204 GHz Coaxial-Cavity Gyrotron. , 2021, , .		1
7	Mechanical Design of the Short Pulse EÃ—B Drift Two-Stage Depressed Collector Prototype for High Power Gyrotron. , 2021, , .		1
8	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
9	Triode magnetron injection gun for the KIT 2 MW 170 GHz coaxial cavity gyrotron. Physics of Plasmas, 2020, 27, .	1.9	10
10	Mechanical Design Study for Gyrotron EÃ—B Drift Two-Stage Depressed Collector. , 2020, , .		1
11	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
12	Automated mode recovery for gyrotrons demonstrated at Wendelstein 7-X. Fusion Engineering and Design, 2019, 148, 111258.	1.9	5
13	DEMO-Relevant Gyrotron Research at KIT. , 2019, , .		1
14	Experimental Study of the Emission Properties of Magnetron Injection Guns for High-Power Gyrotrons. , 2019, , .		0
15	THALES TH1507 140 GHz 1 MW CW Gyrotron for W7-X Stellarator. , 2019, , .		5
16	Towards Advanced Fusion Gyrotrons: 2018 Update on Activities within EUROfusion. EPJ Web of Conferences, 2019, 203, 04007.	0.3	1
17	Studies towards an upgraded 1.5 MW gyrotron for W7-X. EPJ Web of Conferences, 2019, 203, 04003.	0.3	6
18	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
19	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
20	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
21	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
22	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
23	Gyrotron multistage depressed collector based on $E \times B$ drift concept using azimuthal electric field. II: Upgraded designs. Physics of Plasmas, 2019, 26, .	1.9	10
24	Development and Experimental Verification of an XY-Table for the Optimization of the Alignment of High-Power Gyrotrons. IEEE Transactions on Electron Devices, 2019, 66, 1954-1959.	3.0	11
25	Overview of recent gyrotron R&D towards DEMO within EUROfusion Work Package Heating and Current Drive. Nuclear Fusion, 2019, 59, 066014.	3.5	18
26	Coaxial multistage depressed collector design for high power gyrotrons based on $E \times B$ concept. Physics of Plasmas, 2019, 26, .	1.9	6
27	New trends of gyrotron development at KIT: An overview on recent investigations. Fusion Engineering and Design, 2019, 146, 341-344.	1.9	8
28	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
29	An Improved Diagnostic Device for Magnetron Injection Guns of High-Power Gyrotrons. IEEE Transactions on Electron Devices, 2018, 65, 2294-2300.	3.0	1
30	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
31	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
32	KIT in-house manufacturing and first operation of a 170 GHz 2 MW longer-pulse coaxial-cavity pre-prototype gyrotron. , 2018, , .		3
33	Gyrotron multistage depressed collector based on $E \times B$ drift concept using azimuthal electric field. I. Basic design. Physics of Plasmas, 2018, 25, .	1.9	19
34	2018 Status on KIT Gyrotron Activities. EPJ Web of Conferences, 2018, 187, 01009.	0.3	3
35	Progress in the development of a multistage depressed collector system for high power gyrotrons. , 2018, , .		1
36	Current Status of the KIT Coaxial-Cavity Long-Pulse Gyrotron and its Key Components. EPJ Web of Conferences, 2018, 187, 01028.	0.3	3

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37	KIT coaxial gyrotron development: from ITER toward DEMO. International Journal of Microwave and Wireless Technologies, 2018, 10, 547-555.	1.9	24
38	EU DEMO EC system preliminary conceptual design. Fusion Engineering and Design, 2018, 136, 1173-1177.	1.9	18
39	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
40	Evaluation and Influence of Gyrotron Cathode Emission Inhomogeneity. IEEE Transactions on Electron Devices, 2017, 64, 1315-1322.	3.0	9
41	Conceptual designs of $E \times B$ multistage depressed collectors for gyrotrons. Physics of Plasmas, 2017, 24, .	1.9	19
42	Magnetic field profile analysis for gyrotron experimental investigation. Physics of Plasmas, 2017, 24, .	1.9	15
43	RF Behavior and Launcher Design for a Fast Frequency Step-tunable 236 GHz Gyrotron for DEMO. Frequenz, 2017, 71, .	0.9	4
44	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
45	Conceptual design of the EU DEMO EC-system: main developments and R&D achievements. Nuclear Fusion, 2017, 57, 116009.	3.5	21
46	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
47	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
48	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
49	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
50	Design of $E \times B$ multistage depressed collector concepts for high-power fusion gyrotrons. , 2017, , .		1
51	Novel multistage depressed collector for high power fusion gyrotrons based on an $E \times B$ drift concept. , 2017, , .		6
52	KIT coaxial gyrotron development: From ITER towards DEMO. , 2017, , .		6
53	Comparison between controlled non-adiabatic and $E \times B$ concepts for gyrotron multistage depressed collectors. EPJ Web of Conferences, 2017, 149, 04005.	0.3	9
54	European research activities towards a future DEMO gyrotron. EPJ Web of Conferences, 2017, 149, 04007.	0.3	3

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55	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
56	Recent Trends in Fusion Gyrotron Development at KIT. EPJ Web of Conferences, 2017, 157, 03017.	0.3	1
57	Investigation on mode eigenvalue limits for stable 236 GHz, 1 MW-class gyrotron operation. , 2016, , .		2
58	Influence of emitter ring manufacturing tolerances on electron beam quality of high power gyrotrons. Physics of Plasmas, 2016, 23, .	1.9	28
59	Gyrotronâ€Forschung und â€Entwicklung am KIT. Vakuum in Forschung Und Praxis, 2016, 28, 21-27.	0.1	3
60	Proposal of an inverse magnetron injection gun for future hollow-cylindrical-cavity high power gyrotrons. , 2016, , .		6
61	Manufacturing and tests of the European 1 MW, 170 GHz CW gyrotron prototype for ITER. , 2016, , .		9
62	Multistage depressed collector design approach for gyrotron. , 2016, , .		2
63	Progress on the upgrade of the TCV EC-system with two 1MW dual-frequency gyrotrons. , 2016, , .		2
64	Simulations of the experimental operation of the EU 170 GHz, 1 MW short-pulse prototype gyrotron for ITER. , 2016, , .		3
65	Impact of emitter ring manufacturing tolerances on electron beam quality in high power gyrotrons. , 2016, , .		0
66	Electron trapping mechanisms in magnetron injection guns. Physics of Plasmas, 2016, 23, .	1.9	42
67	Choice of material composition for a high-performance inverted Magnetron Injection Gun. , 2016, , .		2
68	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
69	3D Simulation of a realistic Multistage Depressed Collector for high-power fusion gyrotrons. , 2016, , .		3
70	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
71	Multistage depressed collector conceptual design for thin magnetically confined electron beams. Physics of Plasmas, 2016, 23, .	1.9	27
72	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

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73	Experimental results and outlook of the 2 MW 170 GHz coaxial-cavity gyrotron towards long pulse operation. , 2016, , .		6
74	Preliminary studies on Multistage Depressed Collectors for fusion gyrotrons. , 2016, , .		7
75	A fast frequency step-tunable 236 GHz gyrotron design for DEMO. , 2016, , .		3
76	Influence of emitter surface roughness on high power fusion gyrotron operation. Nuclear Fusion, 2016, 56, 026002.	3.5	10
77	Multi-frequency operation of DEMO gyrotron with realistic electron beam parameters. , 2015, , .		9
78	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
79	Gyrotron development at KIT: FULGOR test facility and gyrotron concepts for DEMO. Fusion Engineering and Design, 2015, 96-97, 589-592.	1.9	14
80	Interaction circuit design and RF behavior of a 236 GHz gyrotron for DEMO. , 2015, , .		8
81	Evaluation of gyrotron cathode emission inhomogeneity from current-voltage characteristics. , 2015, , .		1
82	From W7-X towards ITER and beyond: Status and progress in EU fusion gyrotron developments. , 2015, , .		2
83	Recent experimental results of the European 1 MW, 170 GHz short-pulse gyrotron prototype for ITER. , 2015, , .		13
84	Multi-frequency design of a 2 MW coaxial-cavity gyrotron for DEMO. , 2015, , .		5
85	Dual-frequency, 126/84 GHz, 1 MW gyrotron for the upgrade of the TCV EC-system. , 2015, , .		4
86	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
87	Magnetron injection gun for a 238 GHz 2 MW coaxial-cavity gyrotron. , 2015, , .		6
88	A comparative study on the modeling of dynamic after-cavity interaction in gyrotrons. Physics of Plasmas, 2015, 22, 053106.	1.9	14
89	A design proposal for an optimized inverse Magnetron Injection Gun for the KIT 2 MW / 170 GHz modular coaxial cavity gyrotron. , 2015, , .		5
90	2 MW, 170 GHz coaxial-cavity short-pulse gyrotron &#x2014; Single stage depressed collector operation. , 2014, , .		19

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91	Separation of thermal expansion and beam charge neutralization effects in high power 140 GHz CW gyrotrons. , 2014, , .		2
92	Development of advanced gyrotrons. , 2014, , .		3
93	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
94	High-Efficiency Quasi-Optical Mode Converter for a 1-MW $TE_{32,9}$ -Mode Gyrotron. IEEE Transactions on Plasma Science, 2013, 41, 2748-2753.	1.3	24
95	Design of the EU-1MW gyrotron for ITER. , 2013, , .		7
96	Analysis of mode competition in 10kW/28GHz gyrotron. , 2013, , .		1
97	Collector Loading of the 2-MW, 170-GHz Gyrotron for ITER in Case of Beam Power Modulation. IEEE Transactions on Plasma Science, 2013, 41, 2742-2747.	1.3	5
98	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
99	Preliminary study on the effects of emitter surface roughness on gyrotron electron beam quality. , 2013, , .		4
100	Thermomechanical influence of gyrotron power modulation on the collector of a 2 MW, 170 GHz gyrotron. , 2013, , .		0
101	Numerical investigations on the effects of electron beam misalignment on beam-wave interaction in a high-power coaxial gyrotron. , 2013, , .		4
102	2 MW, 170 GHz coaxial-cavity short-pulse gyrotron - Investigations on electron beam instabilities and parasitic oscillations. , 2013, , .		15
103	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
104	EURIDICE: A code-package for gyrotron interaction simulations and cavity design. EPJ Web of Conferences, 2012, 32, 04016.	0.3	80
105	Study of the ITER Stray Magnetic Field Effect on the EU 170-GHz 2-MW Coaxial Cavity Gyrotron. IEEE Transactions on Plasma Science, 2012, 40, 1945-1956.	1.3	5
106	Numerical study of the effects of the magnetic axis misalignment in the EU coaxial cavity gyrotron for ITER. , 2012, , .		3
107	High power gyrotron development at KIT for ECH&CD of fusion plasmas. , 2012, , .		2
108	Design of a 10kW/28GHz gyrotron with a segmented emitter using controlled-porosity reservoir cathodes. , 2012, , .		0

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109	EU gyrotron development for ITER: Recent achievements and experimental results of the coaxial 2 MW gyrotron. , 2012, , .		4
110	2 MW Coaxial-Cavity Pre-Prototype Gyrotron for ITER - recent experiments with the modified gyrotron setup -. , 2012, , .		4
111	Calculation of stray magnetic field effects on the operation of the ITER electron cyclotron system. , 2011, , .		0
112	Status of the EU 170 GHz/2 MW/CW coaxial cavity gyrotron for ITER: The dummy gun experiment. , 2010, , .		1
113	Gun design criteria for the refurbishment of the first prototype of the EU 170GHz/2MW/CW coaxial cavity gyrotron for ITER. , 2009, , .		8
114	On the effect of the approximations used in gyrotron interaction calculations. , 2009, , .		1
115	Mode content analysis of the RF output of a gyrotron based on the astigmatic Gaussian beam of higher order. , 2009, , .		0
116	Parameterization technique for the preliminary gun design of the EU 170GHz 1MW conventional cavity gyrotron for ITER. , 2008, , .		5
117	A New Concept for the Collection of an Electron Beam Configured by an Externally Applied Axial Magnetic Field. IEEE Transactions on Plasma Science, 2008, 36, 469-480.	1.3	59