Ren-zhen Xiao

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/5182312/publications.pdf

Version: 2024-02-01

		471509	501196
60	901	17	28
papers	citations	h-index	g-index

60	60	60	255
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Conversion of Cherenkov Radiation to Transition Radiation by Electron Bunch Post-Acceleration for Extremely Efficient Beamâ€“Wave Interaction. IEEE Transactions on Electron Devices, 2022, 69, 1409-1415.	3.0	4
2	Electron Autoacceleration and Efficient Microwave Generation in a Radial Three-Cavity Transit-Time Oscillator With Two Output Ports. IEEE Transactions on Electron Devices, 2022, 69, 736-740.	3.0	4
3	Efficiency improvement by a beam filtering ring in a relativistic backward wave oscillator at low magnetic field. Physics of Plasmas, 2022, 29, .	1.9	2
4	Theoretical calculation and particle-in-cell simulation of a multi-mode relativistic backward wave oscillator operating at low magnetic field. Physics of Plasmas, 2022, 29, .	1.9	3
5	Effect of Microwave Leakage on Backward Current in an X-Band Dual-Mode RBWO Packaged With Permanent Magnet. IEEE Transactions on Electron Devices, 2022, 69, 4592-4597.	3.0	1
6	Suppression of backward current in a low-magnetic-field foilless diode. Physics of Plasmas, 2021, 28, .	1.9	3
7	Microwave breakdown in an overmoded relativistic backward wave oscillator operating at low magnetic field. Plasma Research Express, 2021, 3, 025001.	0.9	4
8	Experimental Investigation of a Super Klystron-Like Relativistic Backward Wave Oscillator Operating With Low Magnetic Field. IEEE Transactions on Electron Devices, 2021, 68, 3045-3050.	3.0	14
9	Mixed-Modes Conversion Method for Dual-Mode Relativistic Backward-Wave Oscillators. IEEE Microwave and Wireless Components Letters, 2021, 31, 1243-1246.	3.2	3
10	Role of Second Harmonic in the Optimization of Microwave Conversion Efficiency From an Intense Relativistic Electron Beam. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 5284-5290.	4.6	7
11	Efficiency Enhancement of a Klystron-Like Relativistic Backward Wave Oscillator With Waveguide Reflection and Bunching Promotion. IEEE Access, 2020, 8, 164972-164976.	4.2	4
12	Experimental investigations on density bunching and its power influence in a relativistic backward-wave oscillator with low-magnetic-field operation. Physics of Plasmas, 2020, 27, .	1.9	3
13	Effects of transverse electron beam motion in a relativistic backward wave oscillator operating at low guiding magnetic field. AIP Advances, 2020, 10, .	1.3	5
14	Preliminary investigation of a magnetically insulated relativistic backward wave oscillator operating in the C-band with low magnetic field. Physics of Plasmas, 2020, 27, .	1.9	7
15	Efficient generation of multi-gigawatt power by an X-band dual-mode relativistic backward wave oscillator operating at low magnetic field. Physics of Plasmas, 2020, 27, .	1.9	34
16	Investigation of an X band high efficiency klystron-like relativistic backward wave oscillator. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 164102.	0.5	4
17	A Dual-Frequency High-Power Microwave Generator. IEEE Transactions on Plasma Science, 2019, 47, 4287-4291.	1.3	6
18	Phase stabilization of a relativistic backward wave oscillator by controlling the cathode characteristics for a slowly rising voltage pulse. Journal of Applied Physics, 2019, 125, .	2.5	7

#	Article	IF	Citations
19	Analyses of bombardment traces on the tube head of a relativistic backward wave oscillator. Physics of Plasmas, 2019, 26, 113106.	1.9	1
20	A High-Current Large-Orbit Gyro-Like Relativistic Backward-Wave Oscillator. IEEE Transactions on Plasma Science, 2019, 47, 4944-4949.	1.3	1
21	Efficiency enhancement of a klystron-like relativistic backward wave oscillator with local decompression magnetic field. Physics of Plasmas, 2019, 26, .	1.9	9
22	Generation of powerful microwave pulses by channel power summation of two X-band phase-locked relativistic backward wave oscillators. Physics of Plasmas, 2018, 25, .	1.9	17
23	Power capacity enhancement for klystron-like RBWOs with a TM021 extraction cavity. Physics of Plasmas, 2018, 25, .	1.9	6
24	Theoretical and experimental research on a high efficiency X-band klystron-like RBWO. AIP Advances, 2018, 8, .	1.3	9
25	Theoretical and Experimental Studies of Off-the-Shelf V-Dot Probes. IEEE Transactions on Plasma Science, 2018, 46, 2985-2992.	1.3	11
26	Generation of Intense PEFs Using a Prolate Spheroidal Reflector Attached to the Bipolar Former of a 10-GW Pulsed Power Generator. IEEE Transactions on Plasma Science, 2018, 46, 3547-3551.	1.3	5
27	Unconventional Microwave Source. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 3245-3252.	4.6	4
28	A High-Gain ${X}$ -Band Overmoded Relativistic Klystron. IEEE Transactions on Electron Devices, 2018, 65, 263-269.	3.0	3
29	An All Circular Waveguide Four-Way Power Combiner With Ultrahigh-Power Capacity and High Combination Efficiency. IEEE Transactions on Plasma Science, 2018, 46, 2475-2479.	1.3	4
30	Research on origination of oscillations and microwave growth in weakly resonant RBWOs. Physics of Plasmas, 2017, 24, 093115.	1.9	2
31	An efficient X-band relativistic backward wave oscillator combining single-mode structure with overmoded structure. Physics of Plasmas, 2017, 24, .	1.9	5
32	Axial motion of collector plasma in a relativistic backward wave oscillator. Physics of Plasmas, 2016, 23, .	1.9	18
33	Direct excitation of TE11 mode in a relativistic backward wave oscillator. Physics of Plasmas, 2016, 23, 023108.	1.9	6
34	A relativistic backward wave oscillator for directly generating circularly polarized TE11 mode. Physics of Plasmas, 2016, 23, 033118.	1.9	2
35	Influence of a falling edge on high power microwave pulse combination. Physics of Plasmas, 2016, 23, 073104.	1.9	4
36	Particle-in-Cell Demonstration of the Effect of Voltage Rise Time on Phase Synchronization in Two Parallel Relativistic Backward-Wave Oscillators. IEEE Transactions on Electron Devices, 2016, 63, 1317-1321.	3.0	13

#	Article	IF	Citations
37	Power combiner with high power capacity and high combination efficiency for two phase-locked relativistic backward wave oscillators. Applied Physics Letters, 2015, 107, .	3.3	33
38	Dual-cavity mode converter for a fundamental mode output in an over-moded relativistic backward-wave oscillator. Applied Physics Letters, 2015, 106, .	3.3	10
39	Mechanism of phase control in a klystron-like relativistic backward wave oscillator by an input signal. Physics of Plasmas, 2014, 21, .	1.9	17
40	Frequency Control of a Klystron-Type Relativistic Cerenkov Generator. IEEE Transactions on Electron Devices, 2014, 61, 4253-4258.	3.0	5
41	An X-band overmoded relativistic klystron. Physics of Plasmas, 2014, 21, .	1.9	9
42	An overmoded relativistic backward wave oscillator with efficient dual-mode operation. Applied Physics Letters, 2014, 104, 093505.	3.3	46
43	Influences of the Modulation Cavity and Extraction Cavity on Microwave Generation and Starting Oscillation in a Klystron-Like Relativistic Backward Wave Oscillator. IEEE Transactions on Electron Devices, 2014, 61, 611-616.	3.0	21
44	Analysis of electromagnetic modes excited in overmoded structure terahertz source. Physics of Plasmas, 2013, 20, .	1.9	30
45	Improved fundamental harmonic current distribution in a klystron-like relativistic backward wave oscillator by two pre-modulation cavities. Applied Physics Letters, 2013, 102, .	3.3	40
46	Effect of non-uniform slow wave structure in a relativistic backward wave oscillator with a resonant reflector. Physics of Plasmas, 2013, 20, .	1.9	23
47	Improved power capacity in a high efficiency klystron-like relativistic backward wave oscillator by distributed energy extraction. Journal of Applied Physics, 2013, 114, .	2.5	12
48	Role of dc space charge field in the optimization of microwave conversion efficiency from a modulated intense relativistic electron beam. Journal of Applied Physics, 2013, 114, .	2.5	18
49	Phase locking of high power relativistic backward wave oscillator using priming effect. Journal of Applied Physics, 2012, 111, .	2.5	31
50	A high-efficiency overmoded klystron-like relativistic backward wave oscillator with low guiding magnetic field. Physics of Plasmas, 2012, 19, .	1.9	51
51	Inducing phase locking of multiple oscillators beyond the Adlerâ€™s condition. Journal of Applied Physics, 2012, 111, .	2.5	38
52	Factors influencing the microwave pulse duration in a klystron-like relativistic backward wave oscillator. Physics of Plasmas, 2012, 19, .	1.9	8
53	RF phase control in a high-power high-efficiency klystron-like relativistic backward wave oscillator. Journal of Applied Physics, 2011, 110, .	2.5	47
54	A high-power high-efficiency klystronlike relativistic backward wave oscillator with a dual-cavity extractor. Applied Physics Letters, 2011, 98, 101502.	3.3	65

#	Article	IF	Citations
55	High efficiency coaxial klystron-like relativistic backward wave oscillator with a premodulation cavity. Physics of Plasmas, 2011, 18, 113102.	1.9	14
56	Starting current of coaxial relative backward wave oscillator. Physics of Plasmas, 2010, 17, .	1.9	16
57	Plasma expansion and impedance collapse in a foil-less diode for a klystronlike relativistic backward wave oscillator. Physics of Plasmas, 2010, 17, .	1.9	26
58	High efficiency X-band magnetically insulated line oscillator with a separate cathode. Physics of Plasmas, 2010, 17, .	1.9	13
59	High efficiency annular magnetically insulated line oscillator-transit time oscillator with three separate frequencies in three bands. Journal of Applied Physics, 2009, 106, .	2.5	15
60	Efficiency enhancement of a high power microwave generator based on a relativistic backward wave oscillator with a resonant reflector. Journal of Applied Physics, 2009, 105, .	2.5	78