Igor A Chernyavskiy

List of Publications by Year
in descending order

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38 papers	702 citations	759233 12 h-index	794594 19 g-index
38 all docs	38 docs citations	38 times ranked	339 citing authors

#	Article	IF	Citations
1	Demonstration of a High Power, Wideband 220-GHz Traveling Wave Amplifier Fabricated by UV-LIGA. IEEE Transactions on Electron Devices, 2014, 61, 1672-1678.	3.0	168
2	Design Methodology and Experimental Verification of Serpentine/Folded-Waveguide TWTs. IEEE Transactions on Electron Devices, 2014, 61, 1679-1686.	3.0	105
3	Experimental Study and Analysis of an S-Band Multiple-Beam Klystron With 6% Bandwidth. IEEE Transactions on Electron Devices, 2009, 56, 846-854.	3.0	70
4	A Computationally Efficient Two-Dimensional Model of the Beamâ€“Wave Interaction in a Coupled-Cavity TWT. IEEE Transactions on Plasma Science, 2012, 40, 1575-1589.	1.3	40
5	Large-Signal Multifrequency Simulation of Coupled-Cavity TWTs. IEEE Transactions on Electron Devices, 2011, 58, 1229-1240.	3.0	39
6	Modeling Vacuum Electronic Devices Using Generalized Impedance Matrices. IEEE Transactions on Electron Devices, 2017, 64, 536-542.	3.0	34
7	Simulation of Klystrons With Slow and Reflected Electrons Using Large-Signal Code TESLA. IEEE Transactions on Electron Devices, 2007, 54, 1555-1561.	3.0	30
8	Parallel Simulation of Independent Beam-Tunnels in Multiple-Beam Klystrons Using TESLA. IEEE Transactions on Plasma Science, 2008, 36, 670-681.	1.3	30
9	Transmission Line Model for Folded Waveguide Circuits. IEEE Transactions on Electron Devices, 2013, 60, 2906-2911.	3.0	30
10	1-D Large Signal Model of Folded-Waveguide Traveling Wave Tubes. IEEE Transactions on Electron Devices, 2014, 61, 1699-1706.	3.0	29
11	Demonstration of a high power, wideband 220 GHz serpentine waveguide amplifier fabricated by UV-LIGA. , 2013, , .		24
12	Large-Signal 2-D Modeling of Folded-Waveguide Traveling Wave Tubes. IEEE Transactions on Electron Devices, 2016, 63, 2531-2537.	3.0	19
13	Demonstration of a <i>W</i>-Band Traveling-Wave Tube Power Amplifier With 10-GHz Bandwidth. IEEE Transactions on Electron Devices, 2021, 68, 2492-2498.	3.0	17
14	Development of high-power broadband Ka-band cascaded-TWT. , 2013, , .		10
15	Design of a low voltage folded waveguide four beam Mini-TWT. , 2018, , .		8
16	Calculation and Application of Impedance Matrices for Vacuum Electronic Devices. IEEE Transactions on Electron Devices, 2019, 66, 2409-2414.	3.0	6
17	Numerical Determination of Vacuum Electronic Device Stability. IEEE Transactions on Plasma Science, 2020, 48, 4171-4180.	1.3	6
18	Detailed Analysis of the Interception Current Predicted by the Large-Signal Code TESLA for an Experimental Multiple-Beam Klystron. IEEE Transactions on Electron Devices, 2009, 56, 877-882.	3.0	5

#	Article	IF	Citations
19	Advanced large-signal modeling of Multiple-beam Klystrons using generalized impedance matrix approach. , 2018, , .		5
20	Efficient Calculation of Impedance Matrices for Vacuum Electronic Device Circuit Structures. IEEE Transactions on Electron Devices, 2018, 65, 2264-2271.	3.0	4
21	Adjoint Equations for Beam-Wave Interaction and Optimization of TWT Design. IEEE Transactions on Plasma Science, 2022, 50, 2568-2577.	1.3	4
22	Quasi-3-D Modeling of Higher Order Mode Instability in a Two-Gap Input Cavity of Broadband MBK. IEEE Transactions on Electron Devices, 2018, 65, 2114-2121.	3.0	3
23	From 2D to 1.5D: Reduced Order Simulations with the Large-Signal Code TESLA. , 2021, , .		3
24	Self-Excitation Thresholds in RF Structures. IEEE Transactions on Electron Devices, 2022, 69, 2611-2617.	3.0	3
25	End-to-End Simulation of a Folded Waveguide Traveling Wave Tube Using Impedance Matrices and Compass. , 2021, , .		2
26	Adjoint Approach to Optimization and Sensitivity Analysis of Beam Wave Interaction in Vacuum Electronic Devices. , 2020, , .		2
27	Demonstration of a W-band TWT with 10 GHz Bandwidth. , 2020, , .		2
28	Modeling oscillations in TWTs using the TESLA family of codes. , 2017, , .		1
29	Stability Analysis of VE Amplifiers Based on Determinant Equations. , 2020, , .		1
30	Adjoint Approach to Optimization and Sensitivity Analysis of External Circuit Effects in Vacuum Electronic Devices. , 2021, , .		1
31	Validation of the Stability Analysis Framework Based on the Large-signal Code TESLA-Z by Its Application to the Experimental TWTs. , 2021, , .		1
32	Compact, efficient, high-power millimeter-wave power boosters. , 2017, , .		0
33	Modeling Oscillations in TWTs by Using the Tesla-Family of 2D Large-Signal Codes. , 2017, , .		0
34	Validation of the Tesla-Z Stability Analysis Framework by its Application to Experimental TWTS*. , 2021, , .		0
35	Adjoint Approach to Analysis of External Circuit Effects in Vacuum Electronic Devices*. , 2021, , .		0
36	Design and Recent Status of the NRL Low Voltage Folded Waveguide Four Beam Mini-TWT. , 2018, , .		0

#	Article	IF	Citations
37	Modeling Stability of Vacuum Electronic Devices With the Large-Signal Code TESLA-Z. , 2020, , .		0
38	Adjoint Approach to Optimization of Beam Wave Interaction. , 2020, , .		0