

John Luginsland

List of Publications by Year in descending order

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51
papers

1,584
citations

361413

20
h-index

289244

40
g-index

51
all docs

51
docs citations

51
times ranked

765
citing authors

#	ARTICLE	IF	CITATIONS
1	Quasi-Helmholtz decomposition, Gauss' laws and charge conservation for finite element particle-in-cell. Computer Physics Communications, 2022, 276, 108345.	7.5	5
2	An Envelope Tracking Approach for Finite Element Particle-in-Cell Simulations. , 2022, , .		0
3	A Discrete Cavity Analysis for Coupled-Cavity Travelling Wave Tubes. , 2022, , .		0
4	Explicit Brillouin Flow Solutions in Magnetrons, Magnetically Insulated Line Oscillators, and Radial Magnetically Insulated Transmission Lines. IEEE Transactions on Plasma Science, 2021, 49, 3418-3437.	1.3	18
5	Spaceâ€“charge limited current in nanodiodes: Ballistic, collisional, and dynamical effects. Journal of Applied Physics, 2021, 129, .	2.5	104
6	A Set of Benchmark Tests for Validation of 3-D Particle in Cell Methods. IEEE Transactions on Plasma Science, 2021, 49, 1724-1731.	1.3	13
7	Interface Engineering of Electrical Contacts. Physical Review Applied, 2021, 15, .	3.8	13
8	Nonlinear transmission line-driven apparatus for short-pulse microwave exposure of aerosolized pathogens. Review of Scientific Instruments, 2021, 92, 064712.	1.3	2
9	Time integrator agnostic charge conserving finite element PIC. Physics of Plasmas, 2021, 28, .	1.9	6
10	Apparatus for controlled microwave exposure of aerosolized pathogens. Review of Scientific Instruments, 2021, 92, 014707.	1.3	9
11	Engineered Electrical Contacts. , 2021, , .		0
12	On thermal inactivation of pathogens in aerosolized droplets through electromagnetic heating. Journal of Applied Physics, 2021, 130, .	2.5	3
13	Rubrics for Charge Conserving Current Mapping in Finite Element Electromagnetic Particle in Cell Methods. IEEE Transactions on Plasma Science, 2021, 49, 3719-3732.	1.3	8
14	Theory, simulation, and experiments on a magnetically insulated line oscillator (MILO) at 10 kA, 240 kV near Hull cutoff condition. Physics of Plasmas, 2021, 28, .	1.9	11
15	A new simple algorithm for space charge limited emission. Physics of Plasmas, 2020, 27, .	1.9	18
16	Interference modulation of photoemission from biased metal cathodes driven by two lasers of the same frequency. AIP Advances, 2020, 10, .	1.3	8
17	Recent theory of traveling-wave tubes: a tutorial-review. Plasma Research Express, 2020, 2, 023001.	0.9	17
18	A fast local embedded boundary method suitable for high power electromagnetic sources. AIP Advances, 2020, 10, .	1.3	0

#	ARTICLE	IF	CITATIONS
19	A Two Dimensional Tunneling Resistance Transmission Line Model for Nanoscale Parallel Electrical Contacts. Scientific Reports, 2019, 9, 14484.	3.3	17
20	100 years of the physics of diodes. Applied Physics Reviews, 2017, 4, 011304.	11.3	168
21	The effect of humidity on hydroxyl and ozone production by nanosecond discharges. Combustion and Flame, 2016, 167, 164-171.	5.2	9
22	Absolute Instability near the Band Edge of Traveling-Wave Amplifiers. Physical Review Letters, 2015, 115, 124801.	7.8	31
23	Microwave Power and Phase Measurements on a Recirculating Planar Magnetron. IEEE Transactions on Plasma Science, 2015, 43, 1675-1682.	1.3	14
24	Discrete space charge affected field emission: Flat and hemisphere emitters. Journal of Applied Physics, 2015, 117, .	2.5	43
25	A Tribute to Dr. Robert (Bob) J. Barker 1949â€“2013. IEEE Transactions on Plasma Science, 2014, 42, 1482-1483.	1.3	1
26	Recirculating-Planar-Magnetron Simulations and Experiment. IEEE Transactions on Plasma Science, 2013, 41, 639-645.	1.3	28
27	Excitation of a slow wave structure. Physics of Plasmas, 2012, 19, .	1.9	8
28	Recirculating Planar Magnetrons for High-Power High-Frequency Radiation Generation. IEEE Transactions on Plasma Science, 2011, 39, 980-987.	1.3	47
29	Temporal and spatial locking of nonlinear systems. Applied Physics Letters, 2010, 97, .	3.3	5
30	A re-examination of the Bunemanâ€“Hartree condition in a cylindrical smooth-bore relativistic magnetron. Physics of Plasmas, 2010, 17, 033102.	1.9	32
31	A Cerenkov-like Maser Based on a Metamaterial Structure. IEEE Transactions on Plasma Science, 2010, 38, 1462-1465.	1.3	59
32	Experiments on peer-to-peer locking of magnetrons. Applied Physics Letters, 2009, 95, .	3.3	31
33	Effect of Random Circuit Fabrication Errors on Small-Signal Gain and Phase in Traveling-Wave Tubes. IEEE Transactions on Electron Devices, 2008, 55, 916-924.	3.0	26
34	Review of Cold Cathode Research at the Air Force Research Laboratory. IEEE Transactions on Plasma Science, 2008, 36, 718-728.	1.3	85
35	Analysis of peer-to-peer locking of magnetrons. Physics of Plasmas, 2008, 15, .	1.9	16
36	Effects of frequency chirp on magnetron injection locking. Physics of Plasmas, 2008, 15, 073110.	1.9	15

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37	The Twelfth Special Issue on High-Power Microwave Generation. IEEE Transactions on Plasma Science, 2008, 36, 566-568.	1.3	1
38	Effects of Circuit Manufacturing Errors on Small Signal Gain and Phase in a Traveling Wave Tube. , 2007, , .		0
39	A simple physical derivation of Child's Langmuir space-charge-limited emission using vacuum capacitance. American Journal of Physics, 2005, 73, 160-163.	0.7	44
40	On the elimination of numerical Cerenkov radiation in PIC simulations. Journal of Computational Physics, 2004, 201, 665-684.	3.8	93
41	Three-dimensional particle-in-cell simulations of rapid start-up in strapped oven magnetrons due to variation in the insulating magnetic field. Applied Physics Letters, 2004, 84, 5425-5427.	3.3	27
42	Limiting current in a relativistic diode under the condition of magnetic insulation. Physics of Plasmas, 2003, 10, 4489-4493.	1.9	16
43	Beyond the Child's Langmuir law: A review of recent results on multidimensional space-charge-limited flow. Physics of Plasmas, 2002, 9, 2371-2376.	1.9	113
44	Two-Dimensional Space-Charge-Limited Emission: Beam-Edge Characteristics and Applications. Physical Review Letters, 2001, 87, 145002.	7.8	111
45	Current and current density of a finite-width, space-charge-limited electron beam in two-dimensional, parallel-plate geometry. Physics of Plasmas, 2001, 8, 4202-4210.	1.9	46
46	Comprehensive diagnostic suite for a magnetically insulated transmission line oscillator. Review of Scientific Instruments, 2000, 71, 1539-1547.	1.3	32
47	High-power transit-time oscillator: Onset of oscillation and saturation. Physics of Plasmas, 1997, 4, 4404-4408.	1.9	24
48	Two-Dimensional Child-Langmuir Law. Physical Review Letters, 1996, 77, 4668-4670.	7.8	173
49	Effects of a series resistor on electron emission from a field emitter. Applied Physics Letters, 1996, 69, 2770-2772.	3.3	33
50	A novel two-beam accelerator (twobetron). AIP Conference Proceedings, 1995, , .	0.4	0
51	Beam breakup instability in an annular electron beam. Journal of Applied Physics, 1993, 74, 5877-5879.	2.5	1