

Yue Ying Lau

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127
papers

2,998
citations

29
h-index

49
g-index

194
ext. papers

3,639
ext. citations

2.6
avg, IF

5.14
L-index

#	Paper	IF	Citations
127	Multipactor discharge on metals and dielectrics: Historical review and recent theories. <i>Physics of Plasmas</i> , 1998 , 5, 2120-2126	2.1	236
126	Simple theory for the two-dimensional Child-Langmuir law. <i>Physical Review Letters</i> , 2001 , 87, 278301	7.4	152
125	Two-Dimensional Child-Langmuir Law. <i>Physical Review Letters</i> , 1996 , 77, 4668-4670	7.4	138
124	Nonlinear Thomson scattering: A tutorial. <i>Physics of Plasmas</i> , 2003 , 10, 2155-2162	2.1	106
123	100 years of the physics of diodes. <i>Applied Physics Reviews</i> , 2017 , 4, 011304	17.3	104
122	Externally modulated intense relativistic electron beams. <i>Journal of Applied Physics</i> , 1988 , 64, 3353-3379	2.5	99
121	Theory of a low magnetic field gyrotron (gyromagnetron). <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1982 , 3, 619-644		89
120	. <i>IEEE Transactions on Plasma Science</i> , 2010 , 38, 704-713	1.3	84
119	Microwave absorption on a thin film. <i>Applied Physics Letters</i> , 2003 , 82, 1353-1355	3.4	84
118	Effects of an external magnetic field, and of oblique radio-frequency electric fields on multipactor discharge on a dielectric. <i>Physics of Plasmas</i> , 2000 , 7, 750-757	2.1	79
117	Effects of pulse-length and emitter area on virtual cathode formation in electron guns. <i>Physics of Plasmas</i> , 2002 , 9, 2377-2382	2.1	77
116	Interaction of multipactor discharge and rf circuit. <i>Physical Review Letters</i> , 1995 , 75, 1218-1221	7.4	71
115	Effects of cathode surface roughness on the quality of electron beams. <i>Journal of Applied Physics</i> , 1987 , 61, 36-44	2.5	56
114	Multipactor susceptibility on a dielectric with a bias dc electric field and a background gas. <i>Physics of Plasmas</i> , 2011 , 18, 053508	2.1	49
113	Low-noise microwave magnetrons by azimuthally varying axial magnetic field. <i>Applied Physics Letters</i> , 2003 , 83, 1938-1940	3.4	45
112	Anisotropy and feedthrough in magneto-Rayleigh-Taylor instability. <i>Physical Review E</i> , 2011 , 83, 066405	2.4	42
111	Schottky's conjecture on multiplication of field enhancement factors. <i>Journal of Applied Physics</i> , 2009 , 106, 104903	2.5	41

110	A review of the ac space-charge effect in electron-circuit interactions. <i>Physics of Fluids B</i> , 1992 , 4, 3473-3497		40
109	Ultrafast strong-field photoelectron emission from biased metal surfaces: exact solution to time-dependent Schrödinger Equation. <i>Scientific Reports</i> , 2016 , 6, 19894	4.9	38
108	. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 3928-3967	1.3	38
107	A novel phase focusing mechanism in multipactor discharge. <i>Physics of Plasmas</i> , 1996 , 3, 1481-1483	2.1	36
106	Transition to turbulence in a crossed-field gap. <i>Physics of Plasmas</i> , 1994 , 1, 3725-3727	2.1	36
105	Electric field distribution and current emission in a miniaturized geometrical diode. <i>Journal of Applied Physics</i> , 2017 , 121, 244301	2.5	33
104	Impact of Random Fabrication Errors on Fundamental Forward-Wave Small-Signal Gain and Bandwidth in Traveling-Wave Tubes With Finite-Space-Charge Electron Beams. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 1221-1227	2.9	33
103	On the Spreading Resistance of Thin-Film Contacts. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 1936-1940	2.9	31
102	Electron beam ablation of materials. <i>Journal of Applied Physics</i> , 1999 , 86, 7129-7138	2.5	31
101	Ultrafast and nanoscale diodes. <i>Journal of Plasma Physics</i> , 2016 , 82,	2.7	31
100	MAIZE: a 1 MA LTD-Driven Z-Pinch at The University of Michigan 2009 ,		30
99	A simple physical derivation of Child-Langmuir space-charge-limited emission using vacuum capacitance. <i>American Journal of Physics</i> , 2005 , 73, 160-163	0.7	29
98	Simulation of rapid startup in microwave magnetrons with azimuthally varying axial magnetic fields. <i>Applied Physics Letters</i> , 2004 , 84, 1016-1018	3.4	29
97	A re-examination of the Buneman-Hartree condition in a cylindrical smooth-bore relativistic magnetron. <i>Physics of Plasmas</i> , 2010 , 17, 033102	2.1	28
96	Low-noise microwave oven magnetrons with fast start-oscillation by azimuthally varying axial magnetic fields. <i>IEEE Transactions on Plasma Science</i> , 2004 , 32, 1152-1159	1.3	28
95	One-dimensional modulational instability in a crossed-field gap. <i>Physical Review Letters</i> , 1996 , 76, 3324-3327	1.3	28
94	Phase dependence of Thomson scattering in an ultraintense laser field. <i>Physics of Plasmas</i> , 2002 , 9, 4325-4329	2.4	27
93	. <i>IEEE Transactions on Plasma Science</i> , 2002 , 30, 1160-1168	1.3	27

92	Resistive destabilization of cycloidal electron flow and universality of (near-) Brillouin flow in a crossed-field gap. <i>Physics of Plasmas</i> , 1996 , 3, 4455-4462	2.1	27
91	Effects of a series resistor on electron emission from a field emitter. <i>Applied Physics Letters</i> , 1996 , 69, 2770-2772	3.4	27
90	Temperature Comparison of Looped and Vertical Carbon Nanotube Fibers during Field Emission. <i>Applied Sciences (Switzerland)</i> , 2018 , 8, 1175	2.6	26
89	Effects of magnetic shear on magneto-Rayleigh-Taylor instability. <i>Physics of Plasmas</i> , 2012 , 19, 022703	2.1	26
88	Steady state multipactor and dependence on material properties. <i>Physics of Plasmas</i> , 1997 , 4, 863-872	2.1	26
87	Magnetic Priming at the Cathode of a Relativistic Magnetron. <i>IEEE Transactions on Plasma Science</i> , 2008 , 36, 710-717	1.3	23
86	Absolute Instability near the Band Edge of Traveling-Wave Amplifiers. <i>Physical Review Letters</i> , 2015 , 115, 124801	7.4	22
85	Seeded and unseeded helical modes in magnetized, non-imploding cylindrical liner-plasmas. <i>Physics of Plasmas</i> , 2016 , 23, 101205	2.1	22
84	Discrete helical modes in imploding and exploding cylindrical, magnetized liners. <i>Physics of Plasmas</i> , 2016 , 23, 124502	2.1	21
83	Magneto-Rayleigh-Taylor experiments on a MegaAmpere linear transformer driver. <i>Physics of Plasmas</i> , 2012 , 19, 032701	2.1	20
82	Evolution of sausage and helical modes in magnetized thin-foil cylindrical liners driven by a Z-pinch. <i>Physics of Plasmas</i> , 2018 , 25, 056307	2.1	19
81	An exact field solution of contact resistance and comparison with the transmission line model. <i>Applied Physics Letters</i> , 2014 , 104, 204102	3.4	19
80	Recirculating-Planar-Magnetron Simulations and Experiment. <i>IEEE Transactions on Plasma Science</i> , 2013 , 41, 639-645	1.3	18
79	Multipactor experiment on a dielectric surface. <i>Review of Scientific Instruments</i> , 2001 , 72, 3095-3099	1.7	18
78	Effect of Random Circuit Fabrication Errors on Small-Signal Gain and Phase in Traveling-Wave Tubes. <i>IEEE Transactions on Electron Devices</i> , 2008 , 55, 916-924	2.9	17
77	Effect of Nonuniform Emission on Miram Curves. <i>IEEE Transactions on Plasma Science</i> , 2020 , 48, 146-155	1.3	15
76	Experimental validation of a higher dimensional theory of electrical contact resistance. <i>Applied Physics Letters</i> , 2009 , 95, 072103	3.4	15
75	Some design considerations on using modulated intense annular electron beams for particle acceleration. <i>Journal of Applied Physics</i> , 1987 , 62, 351-356	2.5	15

74	Role of ions in a crossed-field diode. <i>Physical Review Letters</i> , 2007 , 98, 015002	7.4	14
73	Modulation of an intense beam by an external microwave source: Theory and simulation. <i>Applied Physics Letters</i> , 1988 , 52, 431-433	3.4	14
72	Effects of frequency chirp on magnetron injection locking. <i>Physics of Plasmas</i> , 2008 , 15, 073110	2.1	13
71	Limiting current in a relativistic diode under the condition of magnetic insulation. <i>Physics of Plasmas</i> , 2003 , 10, 4489-4493	2.1	13
70	Collapse of cycloidal electron flows induced by misalignments in a magnetically insulated diode. <i>Physics of Plasmas</i> , 1998 , 5, 2447-2453	2.1	13
69	The electro-thermal stability of tantalum relative to aluminum and titanium in cylindrical liner ablation experiments at 550 kA. <i>Physics of Plasmas</i> , 2018 , 25, 032701	2.1	12
68	Harmonic Content in the Beam Current in a Traveling-Wave Tube. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 4285-4292	2.9	12
67	Effects of Multiple Internal Reflections on the Small-Signal Gain and Phase of a TWT. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 1542-1550	2.9	12
66	Analysis of peer-to-peer locking of magnetrons. <i>Physics of Plasmas</i> , 2008 , 15, 103104	2.1	12
65	The effects of multipactor on the quality of a complex signal propagating in a transmission line. <i>Physics of Plasmas</i> , 2019 , 26, 112114	2.1	12
64	On the evaluation of Pierce parameters C and Q in a traveling wave tube. <i>Physics of Plasmas</i> , 2017 , 24, 033114	2.1	11
63	Technique for fabrication of ultrathin foils in cylindrical geometry for liner-plasma implosion experiments with sub-megaampere currents. <i>Review of Scientific Instruments</i> , 2015 , 86, 113506	1.7	11
62	Negative, positive, and infinite mass properties of a rotating electron beam. <i>Applied Physics Letters</i> , 2010 , 97, 111501	3.4	11
61	Extraction of ions from the matrix sheath in ablation-plasma ion implantation. <i>Applied Physics Letters</i> , 2001 , 78, 706-708	3.4	11
60	The Electrothermal Instability on Pulsed Power Ablations of Thin Foils. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 3753-3765	1.3	11
59	Passive mode control in the recirculating planar magnetron. <i>Physics of Plasmas</i> , 2013 , 20, 033108	2.1	10
58	Constriction Resistance and Current Crowding in Vertical Thin Film Contact. <i>IEEE Journal of the Electron Devices Society</i> , 2013 , 1, 83-90	2.3	10
57	An evaluation of the intrinsic emittance of a field emitter. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1996 , 14, 2126		10

56	Effects of frequency spreads on beam breakup instabilities in linear accelerators. <i>Applied Physics Letters</i> , 1989 , 55, 27-29	3.4	10
55	Microwave Power and Phase Measurements on a Recirculating Planar Magnetron. <i>IEEE Transactions on Plasma Science</i> , 2015 , 43, 1675-1682	1.3	9
54	Constriction Resistance and Current Crowding in Electrically Pumped Semiconductor Nanolasers with the Presence of Undercut and Sidewall Tilt. <i>IEEE Journal of Quantum Electronics</i> , 2016 , 52, 1-7	2	9
53	Three-Dimensional Simulations of Magnetic Priming of a Relativistic Magnetron. <i>IEEE Transactions on Plasma Science</i> , 2010 , 38, 1292-1301	1.3	9
52	Conductive versus capacitive coupling for cell electroporation with nanosecond pulses. <i>Journal of Applied Physics</i> , 2009 , 106, 074701	2.5	9
51	Enhancement of cancer chemotherapy in vitro by intense ultrawideband electric field pulses. <i>Journal of Applied Physics</i> , 2006 , 99, 094701	2.5	9
50	Absolute instability in a traveling wave tube model. <i>Physics of Plasmas</i> , 1998 , 5, 4408-4410	2.1	9
49	Diagnostic and Power Feed Upgrades to the MAIZE Facility. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 3973-3981	1.3	9
48	CST Particle Studio Simulations of Coaxial Multipactor and Comparison With Experiments. <i>IEEE Transactions on Plasma Science</i> , 2020 , 48, 1942-1949	1.3	8
47	Stability of Brillouin flow in the presence of slow-wave structure. <i>Physics of Plasmas</i> , 2016 , 23, 092101	2.1	8
46	Effects of Random Circuit Fabrication Errors on the Mean and Standard Deviation of Small Signal Gain and Phase of a Traveling Wave Tube. <i>IEEE Journal of the Electron Devices Society</i> , 2013 , 1, 117-128	2.3	8
45	Azimuthally correlated ablation between z-pinch wire cores. <i>Physics of Plasmas</i> , 2009 , 16, 102702	2.1	8
44	Beam breakup instabilities in linear accelerators: Transition, phase mixing, and nonlinear focusing. <i>Applied Physics Letters</i> , 1988 , 53, 2602-2604	3.4	8
43	Multi-frequency recirculating planar magnetrons. <i>Applied Physics Letters</i> , 2016 , 109, 074101	3.4	8
42	Absolute instability and transient growth near the band edges of a traveling wave tube. <i>Physics of Plasmas</i> , 2018 , 25, 072102	2.1	7
41	An unnoticed property of the cylindrical relativistic Brillouin flow. <i>Physics of Plasmas</i> , 2012 , 19, 043103	2.1	7
40	Explicit Brillouin Flow Solutions in Magnetrons, Magnetically Insulated Line Oscillators, and Radial Magnetically Insulated Transmission Lines. <i>IEEE Transactions on Plasma Science</i> , 2021 , 1-20	1.3	7
39	Analysis of Anode Current From a Thermionic Cathode With a 2-D Work Function Distribution. <i>IEEE Transactions on Plasma Science</i> , 2021 , 49, 749-755	1.3	7

38	Modification of Pierce's Classical Theory of Traveling-Wave Tubes. <i>IEEE Electron Device Letters</i> , 2018 , 39, 1238-1241	4.4	7
37	. <i>IEEE Transactions on Plasma Science</i> , 2020 , 48, 1894-1901	1.3	6
36	Efficient computation of current in multiwire Z-pinch arrays. <i>IEEE Transactions on Plasma Science</i> , 2003 , 31, 1384-1387	1.3	6
35	Caterpillar structures in single-wire Z-pinch experiments. <i>Applied Physics Letters</i> , 2003 , 83, 4915-4917	3.4	6
34	Frequency response of multipactor discharge. <i>Physics of Plasmas</i> , 1998 , 5, 300-304	2.1	6
33	Gyrotron travelling wave amplifier: IV. Analysis of launching losses. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1982 , 3, 45-62		6
32	High-Power Recirculating Planar Crossed-Field Amplifier Design and Development. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 2361-2365	2.9	5
31	Impact of random fabrication errors on backward-wave small-signal gain in traveling wave tubes with finite space charge electron beams. <i>Journal of Applied Physics</i> , 2013 , 113, 074905	2.5	5
30	Temporal and spatial locking of nonlinear systems. <i>Applied Physics Letters</i> , 2010 , 97, 171502	3.4	5
29	High power nonlinear transmission lines with nonlinear inductance 2010 ,		5
28	Thermal Electron Flow in a Planar Crossed-Field Diode. <i>IEEE Transactions on Plasma Science</i> , 2020 , 48, 3109-3114	1.3	5
27	Harmonic Frequency Locking in the Multifrequency Recirculating Planar Magnetron. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 2347-2353	2.9	5
26	. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 710-715	2.9	4
25	Pulse Shortening in Recirculating Planar Magnetrons. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 2354-2360	2.9	4
24	Performance and analysis of an electron cyclotron resonance plasma cathode. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2007 , 25, 781-790	2.9	4
23	Power absorption by thin films on microwave windows. <i>IEEE Transactions on Plasma Science</i> , 2004 , 32, 1292-1297	1.3	4
22	Fluid description of kinetic modes. <i>Physics of Plasmas</i> , 1994 , 1, 2816-2821	2.1	4
21	Theory of Traveling-Wave Tube Including Space Charge Effects on the Circuit Mode and Distributed Cold Tube Loss. <i>IEEE Transactions on Plasma Science</i> , 2020 , 48, 665-668	1.3	3

20	Contact Resistance with Dissimilar Materials: Bulk Contacts and Thin Film Contacts 2011 ,		3
19	Excitation of a slow wave structure. <i>Physics of Plasmas</i> , 2012 , 19, 123104	2.1	3
18	Azimuthal clumping instabilities in a Z-pinch wire array. <i>Physics of Plasmas</i> , 2005 , 12, 052701	2.1	3
17	Model of cavity coupling for beam breakup control. <i>Journal of Applied Physics</i> , 1992 , 72, 3874-3877	2.5	3
16	Beam breakup in recirculating induction accelerators. <i>Applied Physics Letters</i> , 1989 , 55, 2673-2675	3.4	3
15	Extensions of Johnson's Theory of Backward-Wave Oscillations in a Traveling-Wave Tube. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 1519-1524	2.9	2
14	Recirculating planar magnetrons: Simulations and experiment 2011 ,		2
13	Lumped circuit elements, statistical analysis, and radio frequency properties of electrical contact. <i>Journal of Applied Physics</i> , 2009 , 106, 084904	2.5	2
12	Theory, simulation, and experiments on a magnetically insulated line oscillator (MILO) at 10 kA, 240 kV near Hull cutoff condition. <i>Physics of Plasmas</i> , 2021 , 28, 123102	2.1	2
11	Pulse-shortening in recirculating planar magnetrons 2017 ,		1
10	Development of a compact LTD pulse generator for X-ray backlighting of planar foil ablation experiments 2013 ,		1
9	Peer-to-peer locking of magnetrons: Analysis and experiment 2010 ,		1
8	Resonant absorption of a short-pulse laser in a doped dielectric. <i>Applied Physics Letters</i> , 1999 , 74, 2912-2914	3.4	1
7	Kinetic Alfvén mode and kinetic magnetosonic mode from a fluid description. <i>Physics of Plasmas</i> , 1995 , 2, 1367-1371	2.1	1
6	Beam breakup instability in an annular electron beam. <i>Journal of Applied Physics</i> , 1993 , 74, 5877-5879	2.5	1
5	Beam breakup growth and reduction experiments in long-pulse electron beam transport. <i>Journal of Applied Physics</i> , 1994 , 75, 1258-1266	2.5	1
4	High-Power Amplification Experiments on a Recirculating Planar Crossed-Field Amplifier. <i>IEEE Transactions on Plasma Science</i> , 2020 , 48, 1917-1922	1.3	1
3	A Relativistic and Electromagnetic Correction to the Ramo-Shockley Theorem. <i>IEEE Transactions on Plasma Science</i> , 2021 , 49, 2661-2669	1.3	1

- 2 Multipactor experiments on an S-band coaxial test cell.. *Review of Scientific Instruments*, **2021**, 92, 124706.7 1
- 1 Frequency and Power Measurements on the Harmonic Recirculating Planar Magnetron. *IEEE Transactions on Plasma Science*, **2020**, 48, 1868-1878 13 0