

Chunliang Liu

List of Publications by Year in descending order

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115
papers

1,011
citations

482844

16
h-index

488912

28
g-index

116
all docs

116
docs citations

116
times ranked

897
citing authors

#	ARTICLE	IF	CITATIONS
1	<scp>UNIPIC</scp> code for simulations of high power microwave devices. Physics of Plasmas, 2009, 16, .	1.9	178
2	Three-dimensional parallel<scp>UNIPIC-3D</scp> code for simulations of high-power microwave devices. Physics of Plasmas, 2010, 17, 073107.	1.9	93
3	rf mode switching in a relativistic magnetron with diffraction output. Applied Physics Letters, 2010, 97, .	3.2	54
4	Theory of topological corner state laser in Kagome waveguide arrays. APL Photonics, 2021, 6, .	5.5	44
5	Nonlinear topological valley Hall edge states arising from type-II Dirac cones. Advanced Photonics, 2021, 3, .	15.6	42
6	Operation Characteristics of A6 Relativistic Magnetron Using Single-Stepped Cavities With Axial Extraction. IEEE Transactions on Plasma Science, 2014, 42, 3344-3348.	1.4	24
7	A photoionization model considering lifetime of high excited states of N2 for PIC-MCC simulations of positive streamers in air. Physics of Plasmas, 2018, 25, .	1.9	24
8	Operation Characteristics of 12-Cavity Relativistic Magnetron With Single-Stepped Cavities. IEEE Transactions on Plasma Science, 2014, 42, 3283-3287.	1.4	23
9	3D PIC-MCC simulation of corona discharge in needle-plate electrode with external circuit. Plasma Sources Science and Technology, 2020, 29, 015020.	3.2	23
10	Frequency switching in a relativistic magnetron with diffraction output. Journal of Applied Physics, 2011, 110, .	2.3	21
11	Frequency Switching in a 12-Cavity Relativistic Magnetron With Axial Extraction of Radiation. IEEE Transactions on Plasma Science, 2012, 40, 1569-1574.	1.4	21
12	Monte Carlo Analysis of Occurrence Thresholds of Multicarrier Multipactors. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 2734-2748.	4.7	21
13	2D particle-in-cell simulation of the entire process of surface flashover on insulator in vacuum. Physics of Plasmas, 2018, 25, .	1.9	19
14	Review and Mechanism of the Thickness Effect of Solid Dielectrics. Nanomaterials, 2020, 10, 2473.	4.2	19
15	Nanosecond discharge at the interfaces of flat and periodic ripple surfaces of dielectric window with air at varied pressure. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 375-381.	3.1	18
16	Suppressing double-metal-surface resonant multipactor by three dimensional wavy surface. Physics of Plasmas, 2017, 24, .	1.9	18
17	Influence of wall-charge accumulation on the gas dielectric barrier discharge in alternating current plasma display panel. Applied Physics Letters, 2007, 90, 101501.	3.2	16
18	Numerical simulation and analysis of passive intermodulation caused by multipaction. Physics of Plasmas, 2018, 25, .	1.9	16

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19	Stationary statistical theory of two-surface multipactor regarding all impacts for efficient threshold analysis. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	14
20	Amplification of terahertz/infrared field at the nodes of Ranvier for myelinated nerve. <i>Science China: Physics, Mechanics and Astronomy</i> , 2020, 63, 1.	5.4	14
21	Review of developments on polymersâ€™ breakdown characteristics and mechanisms on a nanosecond time scale. <i>AIP Advances</i> , 2020, 10, .	1.3	14
22	A Segmented Polynomial Model to Evaluate Passive Intermodulation Products From Low-Order PIM Measurements. <i>IEEE Microwave and Wireless Components Letters</i> , 2019, 29, 14-16.	3.3	12
23	Analysis of the Address Power in PDPs with a Newly Developed Equivalent Circuit Model. <i>IEEE Transactions on Consumer Electronics</i> , 2007, 53, 243-248.	3.7	11
24	Operation Characteristics of a 12-Cavity Relativistic Magnetron When Considering Secondary and Backscattered Electronsâ€™ Emission. <i>IEEE Transactions on Plasma Science</i> , 2015, 43, 1855-1861.	1.4	11
25	Optimizing the Parameters of a 12-Cavity Rising-Sun Relativistic Magnetron With Single-Stepped Cavities for π -Mode Operation. <i>IEEE Transactions on Plasma Science</i> , 2016, 44, 2852-2858.	1.4	11
26	Capacitances and energy deposition curve of nanosecond pulse surface dielectric barrier discharge plasma actuator. <i>Review of Scientific Instruments</i> , 2014, 85, 053501.	1.4	10
27	DC Breakdown Characteristics of C_{60}/CO_2 Mixtures With Particle-in-Cell Simulation. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2022, 29, 1005-1010.	3.1	10
28	Theory of Nanosecond High-Power Microwave Breakdown on the Atmosphere Side of the Dielectric Window. <i>IEEE Transactions on Plasma Science</i> , 2015, 43, 1670-1674.	1.4	9
29	Compact high-power microwave divider and combiner. <i>Review of Scientific Instruments</i> , 2016, 87, 024702.	1.4	9
30	A dynamical model of microwave window breakdown at vacuum/dielectric interface. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	9
31	Suppression of high-power microwave window breakdown by the sweeping-out-electron effect with an external dc bias electric field. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	9
32	Parametric Type-II Dirac Photonic Lattices. <i>Advanced Quantum Technologies</i> , 2020, 3, 2000015.	4.3	9
33	3-dimensional error diffusion method based on edge detection for digital display devices. <i>IEEE Transactions on Consumer Electronics</i> , 2007, 53, 239-242.	3.7	8
34	Luminance and Luminous Efficacy Improvement of Mercury-Free Flat Fluorescent Lamp With Arlike Electrode. <i>IEEE Transactions on Plasma Science</i> , 2010, 38, 2860-2866.	1.4	8
35	Enhanced multipactor statistical modeling for accurate threshold prediction with numerically tracking electron trajectories. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	8
36	An adaptive subfield coding method for driving AC PDPs. <i>IEEE Transactions on Plasma Science</i> , 2006, 34, 397-402.	1.4	7

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37	Particle-in-Cell/Monte Carlo Simulation of Positive Streamers With Photoionization Model. IEEE Transactions on Plasma Science, 2011, 39, 2226-2227.	1.4	7
38	Porous silicon based on multilayer dielectricâ€¦grating optical sensors with enhanced biosensing. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1651-1654.	1.9	7
39	Note: All solid-state high repetitive sub-nanosecond risetime pulse generator based on bulk gallium arsenide avalanche semiconductor switches. Review of Scientific Instruments, 2016, 87, 086107.	1.4	7
40	Evolution of vacuum surface flashover for angled dielectric insulators with particle-in-cell simulation. Physics of Plasmas, 2022, 29, .	1.9	7
41	Modeling and Simulation of Fe-Doped GaN PCSS in High-Power Microwave. IEEE Transactions on Electron Devices, 2023, 70, 3489-3495.	3.2	7
42	A Line Array of Microplasma Devices With Coplanar Electrodes Operating in Argon. IEEE Transactions on Plasma Science, 2008, 36, 2788-2794.	1.4	6
43	Generation of Coherent Multicarrier Signals for the Measurement of Multicarrier Multipactor. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 3357-3363.	4.7	6
44	Magnetic insulation in a curved vacuum transmission line. Journal of Applied Physics, 2019, 125, .	2.3	6
45	A Composite Exponential Model to Characterize Nonlinearity Causing Passive Intermodulation Interference. IEEE Transactions on Electromagnetic Compatibility, 2019, 61, 590-594.	2.4	6
46	Simulations of Breakdown Voltage of Coplanar Electrodes Microplasma Devices. IEEE Transactions on Plasma Science, 2013, 41, 12-16.	1.4	5
47	Investigation of grooved surface suppressing multipactor across HPM dielectric window. , 2014, , .		5
48	Characteristics of electron emission of Al-Al ₂ O ₃ -Ti/Au diode with a new double-layer insulator. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	1.3	5
49	Influence of copper nanowires grown in a dielectric layer on the performance of dielectric barrier discharge. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, 010603.	1.3	5
50	Particle-in-cell simulation for frequency up-conversion of microwave pulse in a rapidly created plasma. Physics of Plasmas, 2017, 24, 033507.	1.9	5
51	Discharge dynamics of self-oriented microplasma coupling between cross adjacent cavities in micro-structure device driven by a bipolar pulse waveform. Physics of Plasmas, 2018, 25, 043506.	1.9	5
52	Regulation of Ion Permeation of the KcsA Channel by Applied Midinfrared Field. International Journal of Molecular Sciences, 2023, 24, 556.	4.2	5
53	Permeability enhancement of Kv1.2 potassium channel by a terahertz electromagnetic field. Journal of Chemical Physics, 2023, 159, .	3.1	5
54	A novel ZVS double switch flyback inverter and pulse controlled dimming methods for flat DBD lamp. IEEE Transactions on Consumer Electronics, 2011, 57, 995-1002.	3.7	4

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55	Improvement of electrical characteristics and stability of IGZO TFT through surface single crystallization of IGZO film at room temperature. <i>Semiconductor Science and Technology</i> , 2018, 33, 085015.	2.1	4
56	Study on N ₂ –SF ₆ mixtures breakdown characteristics at the gas/dielectric interface of microwave window. <i>Journal of Applied Physics</i> , 2020, 128, 143301.	2.3	4
57	Estimation time delay from field emission to secondary electron emission avalanche in vacuum surface flashover. <i>Physics of Plasmas</i> , 2023, 30, .	1.9	4
58	Image-based dynamic subfield coding for improving gray scale smooth in color PDPs. <i>IEEE Transactions on Consumer Electronics</i> , 2009, 55, 973-977.	3.7	3
59	A metal-insulator-metal electron emitter based on a porous Al ₂ O ₃ film. <i>Applied Physics Letters</i> , 2015, 106, .	3.2	3
60	Optimizing the Properties of InGaZnOx Thin Film Transistors by Adjusting the Adsorbed Degree of Cs+ Ions. <i>Materials</i> , 2019, 12, 2300.	3.0	3
61	Novel electronic readout system for micro-channel plate detector with wedge and strip anode. <i>Journal of Modern Optics</i> , 2019, 66, 697-701.	1.4	3
62	Improving the threshold of multipactor using a graded permittivity dielectric window. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	3
63	PIC Simulation of the Coherent Cerenkov Cyclotron Radiation Excited by a High-Power Electron Beam in a Crossed-Elliptical Metamaterial Oscillator at S-Band. <i>IEEE Transactions on Plasma Science</i> , 2021, 49, 3351-3357.	1.4	3
64	Objective quantification of mode competition in THz BWO optimization. <i>Physics of Plasmas</i> , 2017, 24, 113101.	1.9	2
65	Plasma spatial distribution manipulation and electrical property enhancement through plasma coupling effect. <i>AIP Advances</i> , 2018, 8, 105313.	1.3	2
66	A Multi-Physic Field Lifetime Evaluation Formula for Insulators Under Pulsed Field and Mechanical Stress. <i>IEEE Transactions on Plasma Science</i> , 2021, 49, 3913-3918.	1.4	2
67	Effect of Terahertz Electromagnetic Field on the Permeability of Potassium Channel Kv1.2. <i>International Journal of Molecular Sciences</i> , 2023, 24, 10271.	4.2	2
68	Influence of oxygen partial pressure on microstructure and discharge properties of Mg–Zr–O protective films deposited by magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2010, 28, 88-93.	2.2	1
69	Discharge Images of Subpixel Cells in Plasma Display Panel With New Ramp Setup Waveform for Improving Addressing Time. <i>IEEE Transactions on Plasma Science</i> , 2011, 39, 2992-2993.	1.4	1
70	Study on Omnidirectional Reflection Bands of Two-Dimensional Photonic Crystals and Optical Waveguides Based on This Effect. <i>Journal of Lightwave Technology</i> , 2011, 29, 1975-1979.	4.7	1
71	A compact optical wavelength splitter in one-dimensional photonic crystal waveguides. <i>Journal of Modern Optics</i> , 2012, 59, 1186-1193.	1.4	1
72	Influence of parameter settings on the validity of particle-in-cell simulation for a THz backward-wave oscillator. , 2015, , .		1

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73	A Circuit Particle-in-Cell Coupled Simulation of a Magnetically Insulated Transmission Line System. IEEE Transactions on Plasma Science, 2017, 45, 1762-1768.	1.4	1
74	Charging Effects on Dielectric Resonator Antenna Due to Multienergetic E-Beam Irradiation. IEEE Transactions on Plasma Science, 2018, 46, 2753-2760.	1.4	1
75	Theoretical model for magnetically insulated flow with both negative and positive ions. Journal of Applied Physics, 2019, 126, 043301.	2.3	1
76	Particle-in-cell simulations of cathode plasma evolution in small-gap magnetically insulated transmission lines. Journal of Applied Physics, 2019, 126, .	2.3	1
77	Low peak-to-average ratio 850 GHz backward wave oscillator for THz communication. Physics of Plasmas, 2023, 30, 043102.	1.9	1
78	A numerical investigation on electron runaway threshold at the initial stage of atmospheric streamer development. Physics of Plasmas, 2023, 30, .	1.9	1
79	An extension of first principle combined Monte Carlo method to simulate secondary electron yield of anisotropic crystal Al ₂ O ₃ . Journal of Applied Physics, 2024, 135, .	2.3	1
80	Deep Learning Assisted Inverse Design of High-Power Microwave Devices. IEEE Transactions on Plasma Science, 2024, , 1-6.	1.4	1
81	Two-dimensional child-langmuir law for planar diode with finite-radius emitter. , 0, , .		0
82	Self-sustaining discharge condition of penning gases mixture in plasma display panels. , 0, , .		0
83	Umerical simulation of the discharge characteristics in five-electrode AC PDP. , 0, , .		0
84	An Improved Adaptive Subfield Coding Method for Driving AC PDPs. IEEE Transactions on Plasma Science, 2009, 37, 1305-1310.	1.4	0
85	Multi-discharge phenomenon in coplanar electrodes microplasma devices. European Physical Journal D, 2010, 60, 575-579.	1.3	0
86	Electronic structure variation during aging for Mgâ€Zrâ€O protective films in alternating current plasma display panel. Journal of Applied Physics, 2010, 108, .	2.3	0
87	Pressure-independent point in current-voltage characteristics of coplanar electrode microplasma devices operated in neon. Applied Physics Letters, 2010, 96, 191501.	3.2	0
88	Surface-conduction electron emission from W-Ge-N thin film. , 2010, , .		0
89	Large-Time-Step Particle-in-Cell/Monte Carlo Simulation of the Streamer Initiation Process in a Laser-Triggered Gas Switch. IEEE Transactions on Plasma Science, 2011, 39, 2240-2241.	1.4	0
90	Progressive dimming method for mercury-free flat fluorescent lamp. IEEE Transactions on Consumer Electronics, 2011, 57, 990-994.	3.7	0

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91	PPPS-2013: Overview of plasma display in China. , 2013, , .		0
92	PPPS-2013: Fabrication and electrical characteristics of arrays microplasma device with coplanar electrodes in Al foil. , 2013, , .		0
93	The conformal particle-in-cell simulation of the Eccentric coaxial magnetically insulated transmission line. , 2014, , .		0
94	Multiple Voltage Driving Method for Reducing Invalid Power Caused by Unlighted Lines in PDPs. IEEE Transactions on Plasma Science, 2014, 42, 2229-2235.	1.4	0
95	Particle-in-cell simulation of high voltage breakdown of large gap in vacuum. , 2015, , .		0
96	Effect of electron density in multipaction on the electromagnetic characteristics of microwave device. , 2018, , .		0
97	MAGIC simulation of microwave generation using an active metamaterial powered by an electron beam. , 2018, , .		0
98	Particle-in-cell simulation for frequency up-conversion of microwave to terahertz radiation by a relativistic hollow ionization front. AIP Advances, 2019, 9, .	1.3	0
99	Particle-in-cell simulation of surface plasmon polaritons excited by external introduction of electron density. Journal of Applied Physics, 2020, 128, .	2.3	0
100	Topological Corner State Laser in Kagome Waveguide Arrays. , 2021, , .		0
101	A Mode for Predicting Passive Intermodulation Distortion in Microstrip Lines. , 2019, , .		0
102	The Effect of Angular Secondary Emission and Impact on Multipactor: Statistical Modeling and Threshold Analysis. , 2021, , .		0
103	Multi-scale Correlated Analysis with Material Surface Treatment for Multipactor Suppression of Space Microwave Devices. , 2021, , .		0
104	Novel Offset Complementary Split Ring Resonators on Narrow-wall of Waveguides for HPM Applications. , 2021, , .		0
105	Dispersion Relationship of a Split Ring Resonator Metamaterial Arranged in a Circular Waveguide. , 2020, , .		0
106	PIC Simulations of an S-Band Surface Wave Microwave Oscillator Using a Two-Spiral Metamaterial Structure. , 2020, , .		0
107	High-Efficiency Metal-Insulator-Metal Electron Emitter Based on Porous Alumina Film. IEEE Electron Device Letters, 2023, 44, 1567-1570.	4.2	0
108	Study on Photoelectric Efficiency and Failure Mechanism of High Purity 4H-SiC PCSS. IEEE Transactions on Electron Devices, 2023, 70, 5762-5768.	3.2	0

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109	Effect of introducing KNO ₃ on the preparation of athermal fluorophosphate glass and investigation on its thermo-optical property. <i>Optical Materials</i> , 2023, 145, 114415.	3.7	0
110	Effect of THz Waves of Different Orientations on K ⁺ Permeation Efficiency in the KcsA Channel. <i>International Journal of Molecular Sciences</i> , 2024, 25, 429.	4.2	0
111	Particle-in-Cell Simulation of the Impact of High-Energy Secondary Electrons on a Ka-Band TM ₀₃ Relativistic Backward-Wave Oscillator. <i>IEEE Transactions on Plasma Science</i> , 2024, , 1-5.	1.4	0
112	Study on the Impact of Terahertz Electric Fields on the Kv1.2 Potassium Ion Channel. <i>IEEE Transactions on Plasma Science</i> , 2024, 52, 1515-1521.	1.4	0
113	Effect of Beam Profiles on Photoelectric Efficiency of Side-Illuminated HPSI 4H-SiC PCSS. <i>IEEE Photonics Technology Letters</i> , 2024, 36, 717-720.	2.5	0
114	Analysis of InGaAs/InP Single Photon Avalanche Diodes With Multiplication Width in Sub-Micron. <i>IEEE Journal of Quantum Electronics</i> , 2024, 60, 1-7.	2.0	0
115	Deep learning assisted optimization of Ka-band relativistic backward wave oscillator operating in TM ₀₃ mode with low guiding magnetic field. <i>Journal of Applied Physics</i> , 2024, 135, .	2.3	0