

# 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  | Effect of THz Waves of Different Orientations on K <sup>+</sup> Permeation Efficiency in the KcsA Channel. International Journal of Molecular Sciences, 2024, 25, 429.                              | 4.2 | 0         |
| 2  | An extension of first principle combined Monte Carlo method to simulate secondary electron yield of anisotropic crystal Al <sub>2</sub> O <sub>3</sub> . Journal of Applied Physics, 2024, 135, .   | 2.3 | 1         |
| 3  | Deep Learning Assisted Inverse Design of High-Power Microwave Devices. IEEE Transactions on Plasma Science, 2024, , 1-6.  | 1.4 | 1         |
| 4  | Particle-in-Cell Simulation of the Impact of High-Energy Secondary Electrons on a Ka-Band TM <sub>03</sub> Relativistic Backward-Wave Oscillator. IEEE Transactions on Plasma Science, 2024, , 1-5. | 1.4 | 0         |
| 5  | Study on the Impact of Terahertz Electric Fields on the Kv1.2 Potassium Ion Channel. IEEE Transactions on Plasma Science, 2024, 52, 1515-1521.  | 1.4 | 0         |
| 6  | Effect of Beam Profiles on Photoelectric Efficiency of Side-Illuminated HPSI 4H-SiC PCSS. IEEE Photonics Technology Letters, 2024, 36, 717-720.   | 2.5 | 0         |
| 7  | Analysis of InGaAs/InP Single Photon Avalanche Diodes With Multiplication Width in Sub-Micron. IEEE Journal of Quantum Electronics, 2024, 60, 1-7.  | 2.0 | 0         |
| 8  | Deep learning assisted optimization of Ka-band relativistic backward wave oscillator operating in TM <sub>03</sub> mode with low guiding magnetic field. Journal of Applied Physics, 2024, 135, .   | 2.3 | 0         |
| 9  | Regulation of Ion Permeation of the KcsA Channel by Applied Midinfrared Field. International Journal of Molecular Sciences, 2023, 24, 556.  | 4.2 | 5         |
| 10 | Low peak-to-average ratio 850 GHz backward wave oscillator for THz communication. Physics of Plasmas, 2023, 30, 043102.   | 1.9 | 1         |
| 11 | Effect of Terahertz Electromagnetic Field on the Permeability of Potassium Channel Kv1.2. International Journal of Molecular Sciences, 2023, 24, 10271.   | 4.2 | 2         |
| 12 | Modeling and Simulation of Fe-Doped GaN PCSS in High-Power Microwave. IEEE Transactions on Electron Devices, 2023, 70, 3489-3495.   | 3.2 | 7         |
| 13 | A numerical investigation on electron runaway threshold at the initial stage of atmospheric streamer development. Physics of Plasmas, 2023, 30, .   | 1.9 | 1         |
| 14 | High-Efficiency Metal-Insulator-Metal Electron Emitter Based on Porous Alumina Film. IEEE Electron Device Letters, 2023, 44, 1567-1570.   | 4.2 | 0         |
| 15 | Permeability enhancement of Kv1.2 potassium channel by a terahertz electromagnetic field. Journal of Chemical Physics, 2023, 159, .   | 3.1 | 5         |
| 16 | Estimation time delay from field emission to secondary electron emission avalanche in vacuum surface flashover. Physics of Plasmas, 2023, 30, .   | 1.9 | 4         |
| 17 | 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         |
| 18 | Effect of introducing KNO <sub>3</sub> on the preparation of athermal fluorophosphate glass and investigation on its thermo-optical property. Optical Materials, 2023, 145, 114415.                 | 3.7 | 0         |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 19 | Evolution of vacuum surface flashover for angled dielectric insulators with particle-in-cell simulation. <i>Physics of Plasmas</i> , 2022, 29, .   | 1.9  | 7         |
| 20 | DC Breakdown Characteristics of Câ„Fâ„N/COâ„ Mixtures With Particle-in-Cell Simulation. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2022, 29, 1005-1010.   | 3.1  | 10        |
| 21 | Improving the threshold of multipactor using a graded permittivity dielectric window. <i>Physics of Plasmas</i> , 2021, 28, .  | 1.9  | 3         |
| 22 | Theory of topological corner state laser in Kagome waveguide arrays. <i>APL Photonics</i> , 2021, 6, .   | 5.5  | 44        |
| 23 | Topological Corner State Laser in Kagome Waveguide Arrays. , 2021, , .   |      | 0         |
| 24 | PIC Simulation of the Coherent Cerenkovâ€ 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         |
| 25 | Nonlinear topological valley Hall edge states arising from type-II Dirac cones. <i>Advanced Photonics</i> , 2021, 3, .   | 15.6 | 42        |
| 26 | The Effect of Angular Secondary Emission and Impact on Multipactor: Statistical Modeling and Threshold Analysis. , 2021, , .   |      | 0         |
| 27 | Multi-scale Correlated Analysis with Material Surface Treatment for Multipactor Suppression of Space Microwave Devices. , 2021, , .  |      | 0         |
| 28 | 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         |
| 29 | Novel Offset Complementary Split Ring Resonators on Narrow-wall of Waveguides for HPM Applications. , 2021, , .  |      | 0         |
| 30 | 3D PIC-MCC simulation of corona discharge in needle-plate electrode with external circuit. <i>Plasma Sources Science and Technology</i> , 2020, 29, 015020.  | 3.2  | 23        |
| 31 | Study on N2â€SF6 mixtures breakdown characteristics at the gas/dielectric interface of microwave window. <i>Journal of Applied Physics</i> , 2020, 128, 143301.  | 2.3  | 4         |
| 32 | Particle-in-cell simulation of surface plasmon polaritons excited by external introduction of electron density. <i>Journal of Applied Physics</i> , 2020, 128, .   | 2.3  | 0         |
| 33 | Review and Mechanism of the Thickness Effect of Solid Dielectrics. <i>Nanomaterials</i> , 2020, 10, 2473.  | 4.2  | 19        |
| 34 | 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        |
| 35 | Review of developments on polymersâ€™ breakdown characteristics and mechanisms on a nanosecond time scale. <i>AIP Advances</i> , 2020, 10, .   | 1.3  | 14        |
| 36 | Enhanced multipactor statistical modeling for accurate threshold prediction with numerically tracking electron trajectories. <i>Physics of Plasmas</i> , 2020, 27, .   | 1.9  | 8         |

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|----|--|-----|-----------|
| 37 | Parametric Type-II Dirac Photonic Lattices. <i>Advanced Quantum Technologies</i> , 2020, 3, 2000015.   | 4.3 | 9         |
| 38 | Dispersion Relationship of a Split Ring Resonator Metamaterial Arranged in a Circular Waveguide. , 2020, , .   |     | 0         |
| 39 | PIC Simulations of an S-Band Surface Wave Microwave Oscillator Using a Two-Spiral Metamaterial Structure. , 2020, , .  |     | 0         |
| 40 | Theoretical model for magnetically insulated flow with both negative and positive ions. <i>Journal of Applied Physics</i> , 2019, 126, 043301.   | 2.3 | 1         |
| 41 | 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         |
| 42 | A dynamical model of microwave window breakdown at vacuum/dielectric interface. <i>Physics of Plasmas</i> , 2019, 26, .  | 1.9 | 9         |
| 43 | 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         |
| 44 | Magnetic insulation in a curved vacuum transmission line. <i>Journal of Applied Physics</i> , 2019, 125, .   | 2.3 | 6         |
| 45 | 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        |
| 46 | A Composite Exponential Model to Characterize Nonlinearity Causing Passive Intermodulation Interference. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2019, 61, 590-594.              | 2.4 | 6         |
| 47 | Particle-in-cell simulations of cathode plasma evolution in small-gap magnetically insulated transmission lines. <i>Journal of Applied Physics</i> , 2019, 126, .                                    | 2.3 | 1         |
| 48 | Particle-in-cell simulation for frequency up-conversion of microwave to terahertz radiation by a relativistic hollow ionization front. <i>AIP Advances</i> , 2019, 9, .                              | 1.3 | 0         |
| 49 | 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         |
| 50 | A Mode for Predicting Passive Intermodulation Distortion in Microstrip Lines. , 2019, , .  |     | 0         |
| 51 | Discharge dynamics of self-oriented microplasma coupling between cross adjacent cavities in micro-structure device driven by a bipolar pulse waveform. <i>Physics of Plasmas</i> , 2018, 25, 043506. | 1.9 | 5         |
| 52 | Stationary statistical theory of two-surface multipactor regarding all impacts for efficient threshold analysis. <i>Physics of Plasmas</i> , 2018, 25, .   | 1.9 | 14        |
| 53 | A photoionization model considering lifetime of high excited states of N2 for PIC-MCC simulations of positive streamers in air. <i>Physics of Plasmas</i> , 2018, 25, .                              | 1.9 | 24        |
| 54 | Effect of electron density in multipaction on the electromagnetic characteristics of microwave device. , 2018, , .   |     | 0         |

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|----|---|-----|-----------|
| 55 | Plasma spatial distribution manipulation and electrical property enhancement through plasma coupling effect. AIP Advances, 2018, 8, 105313.   | 1.3 | 2         |
| 56 | Improvement of electrical characteristics and stability of IGZO TFT through surface single crystallization of IGZO film at room temperature. Semiconductor Science and Technology, 2018, 33, 085015.            | 2.1 | 4         |
| 57 | Numerical simulation and analysis of passive intermodulation caused by multipaction. Physics of Plasmas, 2018, 25, .  | 1.9 | 16        |
| 58 | MAGIC simulation of microwave generation using an active metamaterial powered by an electron beam. , 2018, , .  |     | 0         |
| 59 | 2D particle-in-cell simulation of the entire process of surface flashover on insulator in vacuum. Physics of Plasmas, 2018, 25, .   | 1.9 | 19        |
| 60 | Charging Effects on Dielectric Resonator Antenna Due to Multienergetic E-Beam Irradiation. IEEE Transactions on Plasma Science, 2018, 46, 2753-2760.  | 1.4 | 1         |
| 61 | Monte Carlo Analysis of Occurrence Thresholds of Multicarrier Multipactors. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 2734-2748.  | 4.7 | 21        |
| 62 | 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         |
| 63 | 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         |
| 64 | 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         |
| 65 | 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        |
| 66 | Objective quantification of mode competition in THz BWO optimization. Physics of Plasmas, 2017, 24, 113101.   | 1.9 | 2         |
| 67 | Suppressing double-metal-surface resonant multipactor by three dimensional wavy surface. Physics of Plasmas, 2017, 24, .  | 1.9 | 18        |
| 68 | Generation of Coherent Multicarrier Signals for the Measurement of Multicarrier Multipactor. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 3357-3363.   | 4.7 | 6         |
| 69 | Compact high-power microwave divider and combiner. Review of Scientific Instruments, 2016, 87, 024702.  | 1.4 | 9         |
| 70 | 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         |
| 71 | Optimizing the Parameters of a 12-Cavity Rising-Sun Relativistic Magnetron With Single-Stepped Cavities for $\pi$ -Mode Operation. IEEE Transactions on Plasma Science, 2016, 44, 2852-2858.                    | 1.4 | 11        |
| 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 | Particle-in-cell simulation of high voltage breakdown of large gap in vacuum. , 2015, , .  |     | 0         |
| 74 | Theory of Nanosecond High-Power Microwave Breakdown on the Atmosphere Side of the Dielectric Window. IEEE Transactions on Plasma Science, 2015, 43, 1670-1674.   | 1.4 | 9         |
| 75 | Operation Characteristics of a 12-Cavity Relativistic Magnetron When Considering Secondary and Backscattered Electronsâ€™ Emission. IEEE Transactions on Plasma Science, 2015, 43, 1855-1861.                          | 1.4 | 11        |
| 76 | A metal-insulator-metal electron emitter based on a porous Al <sub>2</sub> O <sub>3</sub> film. Applied Physics Letters, 2015, 106, .  | 3.2 | 3         |
| 77 | The conformal particle-in-cell simulation of the Eccentric coaxial magnetically insulated transmission line. , 2014, , .   |     | 0         |
| 78 | Investigation of grooved surface suppressing multipactor across HPM dielectric window. , 2014, , .   |     | 5         |
| 79 | 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         |
| 80 | Capacitances and energy deposition curve of nanosecond pulse surface dielectric barrier discharge plasma actuator. Review of Scientific Instruments, 2014, 85, 053501.   | 1.4 | 10        |
| 81 | 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        |
| 82 | Operation Characteristics of 12-Cavity Relativistic Magnetron With Single-Stepped Cavities. IEEE Transactions on Plasma Science, 2014, 42, 3283-3287.  | 1.4 | 23        |
| 83 | 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         |
| 84 | Characteristics of electron emission of Al-Al <sub>2</sub> O <sub>3</sub> -Ti/Au diode with a new double-layer insulator. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2014, 32, . | 1.3 | 5         |
| 85 | Simulations of Breakdown Voltage of Coplanar Electrodes Microplasma Devices. IEEE Transactions on Plasma Science, 2013, 41, 12-16.   | 1.4 | 5         |
| 86 | PPPS-2013: Overview of plasma display in China. , 2013, , .  |     | 0         |
| 87 | PPPS-2013: Fabrication and electrical characteristics of arrays microplasma device with coplanar electrodes in Al foil. , 2013, , .  |     | 0         |
| 88 | 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        |
| 89 | A compact optical wavelength splitter in one-dimensional photonic crystal waveguides. Journal of Modern Optics, 2012, 59, 1186-1193.   | 1.4 | 1         |
| 90 | Particle-in-Cell/Monte Carlo Simulation of Positive Streamers With Photoionization Model. IEEE Transactions on Plasma Science, 2011, 39, 2226-2227.  | 1.4 | 7         |

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|-----|---|-----|-----------|
| 91  | 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         |
| 92  | Discharge Images of Subpixel Cells in Plasma Display Panel With New Ramp Setup Waveform for Improving Addressing Time. IEEE Transactions on Plasma Science, 2011, 39, 2992-2993.  | 1.4 | 1         |
| 93  | Study on Omnidirectional Reflection Bands of Two-Dimensional Photonic Crystals and Optical Waveguides Based on This Effect. Journal of Lightwave Technology, 2011, 29, 1975-1979.   | 4.7 | 1         |
| 94  | Progressive dimming method for mercury-free flat fluorescent lamp. IEEE Transactions on Consumer Electronics, 2011, 57, 990-994.  | 3.7 | 0         |
| 95  | 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         |
| 96  | Frequency switching in a relativistic magnetron with diffraction output. Journal of Applied Physics, 2011, 110, .   | 2.3 | 21        |
| 97  | Multi-discharge phenomenon in coplanar electrodes microplasma devices. European Physical Journal D, 2010, 60, 575-579.  | 1.3 | 0         |
| 98  | Luminance and Luminous Efficacy Improvement of Mercury-Free Flat Fluorescent Lamp With Arlike Electrode. IEEE Transactions on Plasma Science, 2010, 38, 2860-2866.  | 1.4 | 8         |
| 99  | Influence of oxygen partial pressure on microstructure and discharge properties of Mg $\alpha$ Zr $\alpha$ O protective films deposited by magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 88-93. | 2.2 | 1         |
| 100 | Electronic structure variation during aging for Mg $\alpha$ Zr $\alpha$ O protective films in alternating current plasma display panel. Journal of Applied Physics, 2010, 108, .  | 2.3 | 0         |
| 101 | rf mode switching in a relativistic magnetron with diffraction output. Applied Physics Letters, 2010, 97, .   | 3.2 | 54        |
| 102 | Pressure-independent point in current-voltage characteristics of coplanar electrode microplasma devices operated in neon. Applied Physics Letters, 2010, 96, 191501.  | 3.2 | 0         |
| 103 | Surface-conduction electron emission from W-Ge-N thin film. , 2010, , .   |     | 0         |
| 104 | Three-dimensional parallel<sc>UNIPIC-3D</sc>code for simulations of high-power microwave devices. Physics of Plasmas, 2010, 17, 073107.   | 1.9 | 93        |
| 105 | <sc>UNIPIC</sc> code for simulations of high power microwave devices. Physics of Plasmas, 2009, 16, .   | 1.9 | 178       |
| 106 | An Improved Adaptive Subfield Coding Method for Driving AC PDPs. IEEE Transactions on Plasma Science, 2009, 37, 1305-1310.  | 1.4 | 0         |
| 107 | Image-based dynamic subfield coding for improving gray scale smooth in color PDPs. IEEE Transactions on Consumer Electronics, 2009, 55, 973-977.  | 3.7 | 3         |
| 108 | A Line Array of Microplasma Devices With Coplanar Electrodes Operating in Argon. IEEE Transactions on Plasma Science, 2008, 36, 2788-2794.  | 1.4 | 6         |

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|-----|---|-----|-----------|
| 109 | 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        |
| 110 | 3-dimensional error diffusion method based on edge detection for digital display devices. IEEE Transactions on Consumer Electronics, 2007, 53, 239-242.               | 3.7 | 8         |
| 111 | Analysis of the Address Power in PDPs with a Newly Developed Equivalent Circuit Model. IEEE Transactions on Consumer Electronics, 2007, 53, 243-248.                  | 3.7 | 11        |
| 112 | An adaptive subfield coding method for driving AC PDPs. IEEE Transactions on Plasma Science, 2006, 34, 397-402.   | 1.4 | 7         |
| 113 | Two-dimensional child-langmuir law for planar diode with finite-radius emitter. , 0, , .  |     | 0         |
| 114 | Self-sustaining discharge condition of penning gases mixture in plasma display panels. , 0, , .   |     | 0         |
| 115 | Umerical simulation of the discharge characteristics in five-electrode AC PDP. , 0, , .   |     | 0         |