

Abstract Submitted  
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**Two-dimensional PIC/MCC simulation for magnetized capacitively coupled plasmas.**<sup>1</sup> HONGYU WANG, PENG SUN, School of Physics Science and Technology, Anshan Normal University, Anshan, CN, SHALI YANG, WEI JIANG, Huazhong University of Science and Technology, School of Physics, Wuhan, Hubei, CN, XIANG XU, Dalian University of Technology, School of physics and optoelectronic engineering, Dalian, CN — Magnetized capacitively coupled plasma (MCCP) has been used in microelectronic industry. In MCP, external static magnetic field is applied on the discharging plasma to improve the plasma confine and adjust the electron energy spectra. Typical about 100's Gauss magnetic field can work well. In these cases, the magnetic confine increase the plasma density and (often) decrease the electron temperature. In this work, we have studied MCCP with two-dimensional Particle-in-cell/Monte Carlo collision (PIC/MCC) model under different gas pressure and magnetic field. All the simulating cases apply external magnetic field in the r and z direction. Electron cooling and the EwB drifting motions are observed. And the effects of magnetic field on the plasma properties, such as the plasma density, electron temperature and energy distribution functions are discussed.

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