

Abstract Submitted
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Ion Flux Formation in 2 MHz Capacitive Discharge at Different Gas Pressures¹ IRINA SCHWEIGERT, Institute of Theoretical and Applied Mechanics, Russian Academy of Sciences, INSTITUTE OF THEORETICAL AND APPLIED MECHANICS, RUSSIAN ACADEMY OF SCIENCES TEAM — We have studied the ion energy and angular distribution functions in a 2 MHz capacitive discharge in argon using 1D and 2D Combined Particle in Cell Monte-Carlo Collision simulations. We found that secondary electrons produced by ion bombardment from the electrodes make important contribution to the ionization at higher gas pressure. Calculations showed that the ion flux on the electrode is very sensitive to the plasma parameters. However, the ion angular distribution function weakly responds to a change of the gas pressure. For the given voltage amplitude the ions can have larger energy at higher gas pressure. The explanation of this phenomenon was found. For these conditions, variation of the sheath width can change the regime of ion motion.

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Irina Schweigert
Institute of Theoretical and Applied Mechanics,
Russian Academy of Sciences

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