

This experimental work is concerned with measurement of elementary characteristics of plasma – potential of plasma, electron temperature and density of particles. As research methods were selected the Langmuir probes – especially the single probe. At the beginning of the thesis there are explained shortly the elementary characteristics of plasma and the procedure of determination particular parameters of the plasma from the volt-ampere characteristics of the probe. The third chapter is focused on description of the experiment, the probe, the apparatus and its control. Plasma measured within this work originated from the new hollow magnetron which will serve as future source of nanoparticles. Results of the work are focused on the description of individual parameters of the plasma in dependence on other variables such as the magnetron power, pressure of gas, spatial dependence or presence of additional auxiliary magnetic field.