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Experimental study of electrophysical and spectroscopic parameters of a microhollow cathode glow discharge plasma

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This work presents the results of an experimental study on the electrophysical and spectroscopic parameters of a microhollow cathode glow discharge plasma under argon flow. The experimental dependences of the charge transferred to a conductive target on the argon flow rate and the target distance were obtained. The optical emission spectrum of the plasma inside the microhollow cathode reactor was recorded, and the plasma electron temperature was estimated from it.

Keywords: gas discharge, microhollow cathode, argon, plasma diagnostics, transferred charge, target, optical emission spectrum, electron temperature.

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