LOW-PRESSURE GLOW DISCHARGE IN PLASMA LENSES ON PERMANENT MAGNETS

A.A. Goncharov, I.M. Protsenko, Yu.M. Chekh

Institute of Physics, Nat. Acad. Sci. of Ukraine (46, Nauky Prosp., Kyiv 03028, Ukraine; e-mail: chekh@iop.kiev.ua)

Summary

The results of investigations of the static and dynamic characteristics of self-sustained low-pressure glow discharge (GD) which arises in the crossed $E \times B$ field in electrostatic plasma lenses (PL) on permanent magnets are presented. We evaluated parameters of the gas-discharge medium. Instabilities inherent to this kind of the discharge and its influence on the plasma lens focusing properties are discussed.