

## عنوان مقاله:

Effect of negative oxygen ions on the characteristics of plasma in a cylindrical DC discharge

## محل انتشار:

فصلنامه فیزیک تئوری و کاربردی، دوره 8، شماره 2 (سال: 1393)

تعداد صفحات اصل مقاله: 6

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## خلاصه مقاله:

Langmuir probe measurements are performed in cylindrical dc glow discharge plasma. Plasma was generated in an evacuated glass tube, with circular planedisk electrodes. Measurements were carried out at different points along the axis of tube for different working pressures of pure argon and mixture of argon–oxygen gasses to obtain the plasma density and temperature as well as plasma and floating potentials. Variation of discharge potential as a function of discharge pressure for both plasmas is observed. It is shown that electron temperature, plasma potential, and floating potential in constant current mode and constant pressure are increased from cathode to anode on the axial points of the discharge tube, while electron density is decreased. To sustain the discharge process after adding oxygen to plasma, higher voltage is required since electrons are more energetic at lower density.

## کلمات کلیدی:

Glow discharge plasma Langmuir probe Electron density Floating potential Electronegative

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/763545>

