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**ПОВЕДІНКА ПОРИСТОГО ТИТАНУ В СЕНСОРНИХ СИСТЕМАХ У  
ПРИСУТНОСТІ КИСНЮ ТА ОЗОНУ**

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**BEHAVIOUR OF THE POROUS TITANIUM IN SENSOR SYSTEMS  
AT PRESENCE OF OXYGEN AND OZONE**

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**ABSTRACT**

On the porous titan activated cluster of platinum, in sensor systems with solid protonic electrolyte in presence of oxygen and ozone in the region of potentials 0,16...1,2 V particular reactions of oxidation of the titan and cathodic reduction of oxygen and ozone proceed. On an electrode from the porous titan in these conditions in the region of potentials 0,16...0,6 V alongside with reaction of oxidation of the titan on limiting diffusion current cathodic reduction of ozone proceeds. On cluster platinum and the titan reduction of ozone proceeds in ohmic-diffusion regime at which the current of reduction is proportional to cathodic polarization of electrodes.

In alkaline solutions of fluorine electrolytes in no-current regime at oxidation of the titan there is a diffusion of ions of the titan and oxygen through a passive film on which reaction of ionization of the oxygen dissolved in electrolyte proceeds. It is established, that in the region of potentials -0,8...0,05 V speed of this process is defined by diffusion of the dissolved oxygen to passivating film.

**KEY WORDS:** *porous titanium, sensor systems, solid protonic electrolyte, reduction oxygen, ozone, oxidation of titan.*