TITLE: TITANIUM MATERIALS ANODISED WITH FLUORINE

FIELD OF INTEREST

Biomaterials (Surgery, Osteoarticular, Titanium, Protheses)

CLINICAL NEED

Bacterial infection is one of the main surgical complications associated with the implantation of ostearticular prostheses. There are several methods for the modification of titanium surface and its alloys to achieve antibacterial properties. Most of these methods focus on taking advantage of the photocatalytic properties of Ti02 to achieve antibacterial properties. None of these methods incorporate fluor during the anodizing process for avoiding bacterial adhesion.

DESCRIPTION OF THE INVENTION

The main aspect of the invention relates to a material comprising a titanium alloy substrate and on its surface a layer of titanium oxide with a fluorine content (from 4 to 13 %) obtained by controlling the imposed anodizing conditions (voltage, time, agitation, temperature and medium) which in last instance facilitates the acquisition of an ion with antibacterial properties on the metal surface.

TECHNOLOGY KEYWORDS

Titanium, Oxide, Fluorine, Electrochemical methods, Antibacterial, Biofilm.

IPR STATUS

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Applicants: IIS-FJD.

TYPE AND ROLE OF PARTNER

Looking for commercial partners interested in licensing.

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