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TITLE

Combined material including anodic porous alumina and a polymer matrix, and its use for the dental recondition

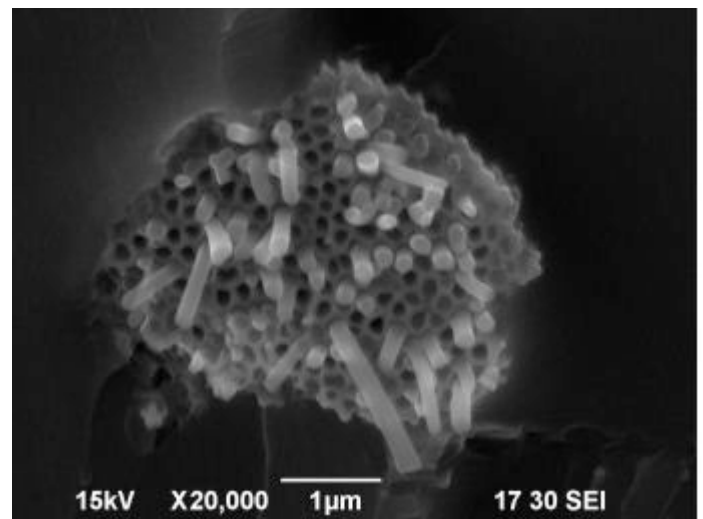
INVENTORS

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DESCRIPTION

The present invention relates to anodic porous alumina (APA) in the form of microparticles, characterized in that it contains interconnected through nanopores, and to its use in the preparation of a new composite material, which is useful for example in the field of conservative dentistry. The invention further relates to a process for preparing the nanoporous alumina of the invention in microparticles.

Thanks to the mechanical interlace that is established between the microparticles of nanoporous alumina and the polymer matrix, the composite material of the invention does not require the use of any coupling agent, further ensuring excellent properties in terms of resistance, elasticity, biocompatibility and stability over time. In fact, the particular microparticulate form of the nanoporous alumina and the presence of interconnected through holes in each microparticle makes it possible to achieve an almost complete penetration of the polymer matrix into the alumina nanopores. In this manner the two components of the composite material are physically interconnected without there being a need to use any type of chemical coupling agent.



APPLICATIONS

Conservative dentistry

KEYWORDS

Anodic porous alumina, dental restoration, nanopores

BIBLIOGRAPHIC DATA

Materiale composito comprendente allumina porosa anodica ed una matrice polimerica, e suo uso per il restauro dentale

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