

- [54] **BIOGLASS COATED Al₂O₃ CERAMICS**
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- [58] Field of Search **106/47 R, 52, 54; 427/171, 257, 269, 279, 398 R, 402, 417, 190; 428/134, 135, 137, 155, 426, 432, 428, 539**

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[57] **ABSTRACT**

A method of coating a Al₂O₃ ceramic surface with a biologically active glass comprising contacting a glass and ceramic having different thermal coefficients of expansion at a temperature sufficient to bond the glass to the ceramic surface by ion diffusion, cooling the coated substrate to a temperature sufficient to produce thermo-mechanical stress induced interconnected micro-cracks in the glass coating and overcoating said micro-cracked glass coating with at least one additional coating of biologically active glass. The invention includes a product of manufacture comprising a compacted Al₂O₃ ceramic surface coated with at least two layers of biologically active glass characterized in that the first layer of glass has interconnected thermo-mechanical stress induced micro-cracks therein.

20 Claims, 7 Drawing Figures

