Title (en)

MONOLITHIC CERAMIC BODY WITH MIXED-OXIDE MARGINAL REGION AND METALLIC SURFACE, METHOD FOR PRODUCING IT AND USE THEREOF

Title (de)

MONOLITHISCHER KERAMIKKÖRPER MIT MISCHOXID-RANDBEREICH UND METALLISCHER OBERFLÄCHE, VERFAHREN ZU DESSEN HERSTELLUNG UND DESSEN VERWENDUNG

Title (fr)

CORPS EN CÉRAMIQUE MONOLITHIQUE POURVU D'UNE ZONE DE BORD EN OXYDES MIXTES ET D'UNE SURFACE MÉTALLIQUE, SON PROCÉDÉ DE FABRICATION ET SON UTILISATION

Publication

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Application

EP 11767993 A 20111006

Priority

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Abstract (en)

[origin: EP2439183A1] The monolithic ceramic body comprises a mixed-oxide marginal region, which comprises an oxide of a first metal and an oxide of a further metal having a high affinity for oxygen, a metallic surface, layers made of further metals, and biocompatible and/or bioactive coatings. The metallic surface comprises the further metal on the marginal region. The mixed-oxide marginal region comprises a continuous concentration gradient of the first metal, starting from 100% in the core down to 0% in the transitional region to the metallic surface of the ceramic body, based on the total metal content. The monolithic ceramic body comprises a mixed-oxide marginal region, which comprises an oxide of a first metal and an oxide of a further metal having a high affinity for oxygen, a metallic surface, layers made of further metals, and biocompatible and/or bioactive coatings. The metallic surface comprises the further metal on the marginal region. The mixed-oxide marginal region comprises: a continuous concentration gradient of the first metal, starting from 100% in the core down to 0% in the transitional region to the metallic surface of the ceramic body, based on the total metal content; and a continuous concentration gradient of the further metal, starting from 0% in the core up to 100% in the transitional region to the metallic surface of the ceramic body, based on the total metal content. The oxygen concentration in the mixed-oxide marginal region remains constant, and the monolithic structure of the ceramic body has no phase boundaries. The further metal is biocompatible. A marginal zone of the ceramic body comprises the mixed oxide-marginal region, and the metallic surface on the marginal region exhibits a thickness of 0.05-140 mu m. An independent claim is included for a method of producing a ceramic body with a mixed oxide-marginal region.

IPC 8 full level

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CPC (source: EP KR US)

A61K 6/802 (2020.01 - US); **A61K 6/816** (2020.01 - US); **A61K 6/818** (2020.01 - US); **A61L 27/10** (2013.01 - KR); **A61L 27/30** (2013.01 - KR); **A61L 31/022** (2013.01 - EP US); **A61L 31/026** (2013.01 - EP US); **C04B 35/4885** (2013.01 - EP US); **C04B 41/009** (2013.01 - EP US); **C04B 41/52** (2013.01 - EP KR US); **C04B 41/90** (2013.01 - EP KR US); **C23C 14/48** (2013.01 - EP US); **F41H 5/02** (2013.01 - US); **F41H 5/0421** (2013.01 - EP US); A61L 2400/18 (2013.01 - EP US); C04B 2111/00405 (2013.01 - EP US); C04B 2111/00836 (2013.01 - EP US); C04B 2235/3232 (2013.01 - EP US); C04B 2235/404 (2013.01 - EP US); C04B 2235/614 (2013.01 - EP US); C04B 2235/75 (2013.01 - EP US); Y10T 428/1259 (2015.01 - EP US); Y10T 428/26 (2015.01 - EP US)

Citation (search report)

See references of WO 2012045830A1

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