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Abstract

In the present work, a biocompatible additive ZnO was used to enhance the sintering of calcium phosphate silicate (CPS)¹ bioceramic and improve its mechanical property. Sol-gel prepared CPS powders were mechanically mixed with various amount of ZnO and then sintered at high temperatures to prepare Zn-CPS bioceramics. The effects of ZnO content and sintering temperature on microstructure and bending strength of Zn-CPS bioceramics were investigated and the related mechanism was also discussed.

¹ CPS: $\text{Ca}_5(\text{PO}_4)_2\text{SiO}_4$

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