# Accepted Manuscript

Study of bioactivity on a TiNbSn alloy surface

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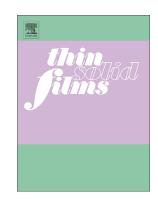
PII: S0040-6090(17)30603-X

DOI: doi: 10.1016/j.tsf.2017.08.023

Reference: TSF 36165

To appear in: Thin Solid Films

Received date: 1 November 2016 Revised date: 10 August 2017 Accepted date: 11 August 2017



Please cite this article as: N. Masahashi, Y. Mori, H. Tanaka, A. Kogure, H. Inoue, K. Ohmura, Y. Kodama, M. Nishijima, E. Itoi, S. Hanada, Study of bioactivity on a TiNbSn alloy surface, *Thin Solid Films* (2017), doi: 10.1016/j.tsf.2017.08.023

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# **ACCEPTED MANUSCRIPT**

### Study of bioactivity on a TiNbSn alloy surface

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#### **Abstract**

The microstructure and surface chemistry of titanium dioxide on TiNbSn alloy, prepared by anodic oxidation in acetic acid electrolytes and subsequent hot water (HW) treatment, have been studied to determine the effect of HW treatment on bioactivity. HW treatment promotes TiO<sub>2</sub> formation and photo-induced properties were observed on the anodic oxide. Cross-section energy dispersive spectroscopy analysis of the implanted anodic TiNbSn treated with HW revealed the penetration of the constituent elements of bone, Ca and P, into TiO<sub>2</sub>, which was attributed to the high bonding

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