

Registration for the Spring-Meeting of the  
German Physical Society  
from 04.03. to 09.03.2005  
in berlinakf

**High resolution synchrotron-tomography on human tooth tissue** — ●H. G. GRÄBER<sup>1</sup>, A. RACK<sup>2</sup>, A. HAIBEL<sup>2</sup>, I. MANKE<sup>3</sup>, H. RIESEMEIER<sup>4</sup>, G. WEIDEMANN<sup>4</sup>, J. GOEBBELS<sup>4</sup>, and J. BANHART<sup>2,3</sup>  
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Caries and periodontitis are the most frequent infectious diseases at all. Both diseases lead to an irreversible loss of mineralized tissues (bone and tooth). The aim of current and future research projects is to develop regenerative strategies by means of tissue engineering. We examine samples for different stages of the disease with synchrotron-tomography using a high spatial resolution of 1.5  $\mu\text{m}$  pixelsize. The demineralized tissue can be detected in the 3d images due to its lower density. By quantitative analysis of the data one obtains information about the disease growing's time-dependence. A comparison of non-treated infected teeth with treated ones (e.g. fluoridation) delivers information about the quality of different regeneration approaches.

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Date: 04.03.—09.03.2005  
Section: Metal Physics  
Subject: Tomographic Methods in Materials Research (internal symposium)  
Presentation: Poster  
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Membership: none