主催：グローバル COE プログラム「構造・機能先進材料デザイン教育研究拠点」

講演会のご案内

講演題目： **Free volumes in nanocrystalline bulk metals**

講　　師： Professor　Wolfgang Sprengel
Graz University of Technology
Institute of Materials Physics

日　　時： 平成 21 年 2 月 20 日（金）
18:45～20:15

場　　所： 産業科学研究所・第 2 研究棟・共同プロジェクト室
（S109 号室）

講演概要：

The concept of a detailed, defect-specific study for a comprehensive understanding of free volume-type defects in nanocrystalline metals which are produced during the extreme conditions of severe plastic deformation will be presented comprising a multi-method approach of positron annihilation spectroscopy (positron lifetime spectroscopy, coincident Doppler broadening technique) and time-dependent dilatometry in combination with structural and thermal characterization. These studies shall yield information on the type and concentration of predominant defects (lattice vacancies and their agglomerates, dislocations, interfacial free volumes), on their variation with processing parameters, and on their thermal behavior. The kinetics of vacancy-type defects is studied by in-situ time-dependent dilatometry and by fast positron annihilation measurements using a high-intense positron beam. From these free volume studies an essential contribution for the understanding of the structural refining process as well as of the enhanced mechanical properties of SPD-processed nanocrystalline metals can be expected.

多数の皆様のご来聴を歓迎します。

問い合わせ先　：　産業科学研究所　金属材料プロセス研究分野
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