

T_CSUH Special Seminar

Texas Center for Superconductivity at the University of Houston

Dr. Giovanni Grasso

Columbus Superconductors SpA

Genova

ITALY

“Development of MgB₂ conductors towards industrial applications”

Monday, May 8, 2006

Room 102, University of Houston Science Center

12:00 noon – 1:00 p.m.

Abstract

Superconductivity at 40 K in MgB₂ was unexpectedly announced by Prof. Akimitsu in January 2001. This stunning news attracted the interest of the entire superconductivity community for many months, leading to the submission of hundreds if not thousands of relevant scientific papers. Their experimental outcomes were very promising in view of an industrial application of MgB₂ in the near future. Reports by several groups indeed confirmed upper critical fields in thin films often larger than 60 Tesla at low temperatures. Several worldwide superconductor wire manufacturers soon started a survey of the possibility of manufacturing superconducting wires based on such a simple and inexpensive binary compound. In this talk, the progresses achieved so far in this respect will be reported, including an overview of the potential markets for such an innovative type of superconductor just after a few years of development.

Bio

Dr. Grasso first studied superconductivity as an undergraduate student in Prof. Rizzuto's group at the University of Genova, Italy. After graduating in Physics in 1992, he joined Prof. Flukiger's group at the University of Geneva (Switzerland), where he received his Ph.D. degree in 1997 working on Bi-2223 superconducting tape development. After a brief period as a post-doc while still in Geneva, he returned to Genova as a senior development scientist at the Italian National Research Council (INFM) with the task of setting up a new lab focused on superconductor materials development. In 2003, he was one of the founders of Columbus Superconductors, a joint-venture company with Ansaldo Superconduttori, with the aim of developing MgB₂ conductors. On April 1st, he became a full time employee of the company with the role of Technical Director.

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