

SÉMINAIRE**Mardi 18 Juin 2013, 14h**

C.S.N.S.M. - Bât. 108 - Salle de réunion

**25+ years of High Temperature
Superconductivity : the long road from
discovery to magnets****Justin Swarz***(NCSU, USA)***Abstract:**

Superconductivity at elevated temperatures in complex oxides was discovered just over twenty-five years ago with a great deal of fanfare and expectations. Today, two material systems have progressed to commercialization and “real” applications are emerging. There remains still, however, a number of significant challenges in understanding the underlying behavior of these materials and in bringing systems to market. In this talk, the progress in HTS development will be reviewed, with some focus on the relationship between scientific understanding and technological impact. The status of HTS conductors is also reviewed in comparison to the more established low temperature Nb-based superconductors and from an applications perspective. The performance limiting mechanisms, including nanoscopic and microscopic connectivity and transport issues, electromechanical issues, and system-driven issues, are presented. Approaches to answering the remaining key questions, using a combination of experimental and computational tools, along with recent results, are discussed.

Site web des séminaires : <http://www-csasm.in2p3.fr/-Seminaires->

Rafraîchissements : 13 h 45.

Renseignements CSNSM :

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