

Abstract Submitted  
for the MAR07 Meeting of  
The American Physical Society

**Giant voltage response to magnetic field of model granular magnetic films and spin mixing effects** JEAN-PHILIPPE ANSERMET, M. HILLENKAMP, G. DIDOMENICANTONIO, C. FELIX, L. GRAVIER, S. SERRANO-GUISAN, M. ABID, EFPL — Magneto-thermoelectric voltage (MTGV) is the magnetic field dependence of the AC voltage measured across a sample subjected to a DC current and to an oscillation of its temperature. Large field sensitivity was found when the measurement was applied to a thin film made by the technique of cluster-assembled materials. [1] Clusters of Co with an average size of 15 atoms per cluster in a copper matrix gave this result. Similar large changes were observed using silver as a matrix. The size of this effect compared to GMR, its temperature and field dependence, in these and other nanostructures, demonstrate that a different process than that responsible for GMR is the determining mechanism. Argument in favour of an asymmetry in the spin mixing process is given.

[1] S. Serrano-Guisan et al., Nature Materials **5**, 730 (2006)

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Date submitted: 17 Nov 2006

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