

**Subject:** Corrected Host: MSD Colloquium, Garcia, Thurs, 10/11, 11am, 212, A-157  
**From:** Suzanne Kokosz <kokosz@anl.gov>  
**Date:** Wed, 03 Oct 2007 07:30:37 -0500  
**To:** Materials Science Division <msd@anl.gov>

## MATERIALS SCIENCE COLLOQUIUM

**SPEAKER:** DR. MIGUEL ANGEL GARCIA  
University Complutense at Madrid

**TITLE:**  $^3\text{Magnetism in Semiconductors}^2$

**DATE:** Thursday, October 11, 2007

**TIME:** 11:00 a.m.

**PLACE:** Building 212, Room A-157

**HOST:** Suzanne te Velthuis

Refreshments will be available at 10:45 a.m.

### Abstract:

Magnetic materials (used for permanent storage of information) and Semiconductors (used to build microprocessors able to process information at high speed) are the basis of nowadays technological device. The join of both kind of materials into a single one should allow to fabricate faster, cheaper and more reliable devices. Therefore, in the last years there is a great interest in the appearance of ferromagnetism in semiconductors. Most research groups have focused on diluted magnetic semiconductors because of the promising theoretical predictions and initial results. In this work, the current experimental situation of ZnO based diluted magnetic semiconductors is presented. Recent results on unexpected ferromagnetic-like behavior in different nanostructures and the possibility to observe ferromagnetism in materials without the typical magnetic atoms are also discussed.

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