

Subject: MS Colloquium-11/17/05-Yan 212/A-157
From: Nancy Sanchez <sanchez@anl.gov>
Date: Wed, 02 Nov 2005 11:12:27 -0600
To: "msd@anl.gov" <msd@anl.gov>, Yuri Galperin <iouri.galperine@fys.uio.no>

MATERIALS SCIENCE COLLOQUIUM

SPEAKER: Dr. Ming Yan
Argonne National Laboratory
MCS Division

TITLE: Dynamic origin of stripe domains

DATE: Thursday, November 17, 2005

TIME: 11:00 a.m.

PLACE: Building 212, Room A157

HOST: Marcos Grimsditch

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

Abstract: We investigate stripe domain formation in nanometer sized Co bars. The magnetic equilibrium states are studied using micromagnetics while the frequencies of spin excitations are obtained from simulations. We find that the lowest frequency standing wave mode has the same spatial structure as the stripe domains at remanence and it goes soft at the field where the stripe domains emerge. We show, therefore, that the final domain structure at remanence, which is not the configuration with lowest energy, is predicted from a high-field analysis of the frequencies of the standing spin waves.