

International Conference on Nanoscale Magnetism



Gebze Institute
of Technology

ICNM-2005

July 3-8, 2005, Istanbul, Turkey



Turkish Scientific &
Research Council



Scope and Topics

The design, synthesis and characterization of nanostructure materials are the subject of intensive scientific researches during the last years due to the rapid development of nanometer-resolution analytical tools and techniques for nano-fabrication. There is presently a large interest in the science and technology of, e.g. magnetic, electrical, optical, and thermal properties of nanostructured materials. Methods for the preparation and processing of nanostructured materials are being developed around the world based on physical, mechanical and chemical routes. The physics and chemistry of nanoscale systems has advanced rapidly over the last few years and there are real prospects of translating these exciting scientific developments into a new generation of high technology products and processes. Since nanotechnology is a generic technology, it also has the potential to impact on a wide range of industrial sectors, from chemicals to electronics, from sensors to advanced materials.

This activity has been inspired in part by realization that the physical-chemical properties of nanoscale materials are dramatically different from those of the bulk counterparts and that nanoscale materials exhibit new or crossover phenomena connected with quantum size effects. Many of unique properties of such materials are moderately well understood although they have high potential for technical applications in diverse areas as information data storage, magnetic heads of computer hard disks, magnetosensor electronics, single electron devices, quantum computers, microwave electronic devices and et al. Summary, the development and research in

the field of magnetic and electrical nanoscale materials is one of the hot topics of today's science, and smart nanotechnologies are expected to be a ground of industry of 21 century

The intensive investigations in the field of the nanoscale granular magnetic materials promote to the great progress in various kinds of the magnetic storage media (computer floppy disks, sound/video tapes, etc.). The technical progress of last years in the preparation of multilayer thin films / nanowires promote to discovering the Giant Magnetoresistance (GMR) / Giant Magnetoimpedance (GMI) phenomena, consisting in extraordinary changing of resistivity/ impedance of the material while applying external magnetic field. The GMR- materials are already found applications as sensors of low magnetic field, computer hard disk heads, magnetoresistive RAM chips etc. The market only in the field of GMR-nanotechnology is estimated over \$100 billion annually. The GMI materials looks very promising in order to develop a new generation of microwave band electronic devices (such as switches, attenuators, antennas) which could be managed electrically.

So, the research and development in the field of nanoscale magnetic materials is one of the most prospective fields in the today's science and ground for the new branches of high-tech industry.

The main aims of the meeting is to give a possibility for promoting information exchange among researchers from all over the world engaged in the field of nanoscale magnetism and nanostructured materials, and as a result, to promote for the participation of research groups and companies in international projects for the development of magnetic nanomaterials, nanotechnologies and nanoproducts.

The central goal of the Conference is to bring together scientists making basic and applied research in universities and research institutions, as well as researchers and technologists from industrial labs to share their expertise and experience, and to provide closer links between academic science and industry. The scope of the meeting comprises various aspects of synthesis and patterning of magnetic nanostructures, their magnetic properties, topics in spin-dependent transport, spintronics applications.

The presentations will be concentrated on the topics:

- Fundamental magnetic properties on nanometer scale
- Design, synthesis and characterization of nanostructured materials
- Nanoparticlar assemblies and granular films
- Nanostructured magnetic semiconductors and quantum dots
- Industrial aspects of nanoscale materials
- Nanoscaled magnetoelectronics
- Molecular nanotechnology
- Advanced nanodevice modeling
- Advanced magnetic materials and techniques
- Applications of nanostructured magnetic materials

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Arunava Gupta, IBM, USA

Bretislav Heinrich, Simon Fraser University, Canada

H.J.M.Swagten, Eindhoven University of Technology The Netherlands

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Mamoun Muhammed, Poyal Institute of Technology, Sweden

Dates and Facts

Important deadlines:

Pre registration: Mart 1, 2005

Abstract submission: Mart 1, 2005

Notification about acceptance of abstracts: April 1, 2005

Second Announcement: April 1, 2005

Conference and Hotel Registration: May 15, 2005

Third Announcement including Programme: June 1, 2005

Advanced Registration: June 15, 2005

Manuscript Submission: July 5, 2003

Registration

Participants are kindly requested to visit the website of the workshop regarding registration, hotel accommodation, program, as well as other information, at <http://www.gyte.edu.tr/workshop/2005/ICNM2005.htm>

Deadline for Pre-registration: Mart 1, 2005

Please, complete the Registration Form in the Webpage, and submit it before Mart 1, 2005

Deadline for hotel registration: May 15, 2005.

Please download the Accommodation form from the webpage, complete and send it by e-mail to faik@gyte.edu.tr before May 15

Deadline for advanced registration: June 15, 2005.

Please download the Advanced Registration form from the webpage, complete and send it by e-mail to faik@gyte.edu.tr before June 15

Conference Fees

Registration Fee:

	Before May 15:	After May 15:
Researchers	250 Euro	300 Euro
Students	150 Euro	200 Euro

Accommodation Fees

Detailed information about the hotel and accommodation fees will be soon presented in our webpage.

Abstracts Submission

A one-page abstract written in English have to be submitted before the deadline for abstracts.

Only objective scientific and technical papers of a non-commercial nature will be accepted.

Accepted abstracts will be published in the Abstract Book that will be available at the Workshop.

The abstract should be sent by e-mail to: faik@gyte.edu.tr before Mart 1, 2005.

Abstract Format:

1 page 'camera ready' - A4 (210*297 mm) size format

all margins 3 cm

font 'Times New Roman', 12 pt., single spaced

font 'Symbol' for mathematical or Greek letters

title: upper cases, bold, centered; start in the first line

author's names: centered, start with two lines space left below the title

name of author who will present the paper should be underlined

affiliations: centered, start with one line space left below the names and give the e-mail address

if available

text: start with two lines space below the affiliations

illustrations, figures, etc. should be inserted in the text

references should be in square brackets [], the reference format as follows: number, F.S. Name, ..., Periodical, (year), volume, page

word processor file format: Microsoft Word 97 and higher

use SI units and internationally recognized terminology and symbols

Contact Information

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