

Preface

The recent advances in spin electronics have created a demand for a more structured method of sharing and disseminating information and experience gathered by the leading research groups engaged in the subject. Hence the idea of a international scientific network “**New materials for magnetoelectronics – MAG-EL-MAT**” which was founded early in 2003 and has soon gained support of a number of research institutes in Poland as well as financial support of the Ministry of Scientific Research and Information Technology now extended until 2008.

Currently, MAG-EL-MAT network extends on 52 research groups bringing together over 300 scientists investigating the electric and magnetic properties of solids, with particular interest in various applications of the spin degree of freedom. The general theoretical and experimental long term goal is to research the electronic and magnetic properties of nanoscopic materials such as thin layers, multi-layers, composites, nanocrystalline alloys, intermetallic compounds, molecular systems (including carbon nanotubes) and quantum dots. Knowledge and new materials developed by network members are the basis for the creation of new magnetoelectronic devices.

The first **MAG-EL-MAT** Members Meeting held in Będlewo between 26 and 28 October 2003, gathered 43 participants from 16 Polish institutions, who appointed the Coordinating Committee, familiarized themselves with the main programme of the Network and presented briefly the institution they represented, its main research topic and fields of possible collaboration.

The second Members Meeting on 13-16 April 2004 collected about 70 members and was divided into 11 plenary sessions. The participants listened to 9 plenary lectures and 17 oral contributions. Additionally, 9 posters were presented and 7 special talks given on the achievements of various **MAG-EL-MAT** institutions Centres of Excellence (CoE) and the opportunities available within the framework of the EU programmes.

The venue of the third Members Meeting to be held on 2-6 May, 2005 is again Będlewo which has now become the traditional meeting place of **MAG-EL-MAT** members. Its convenient and attractive location (40 km from Poznań, amidst lakes and forests, in a old palace and modern buildings offering excellent accommodation and conference facilities) has now become recognized by our regular visitors.

The meeting will take a form of a series of sessions chaired by leading scientists selected by the coordinating committee. Their task was also to decide upon the topics of the sessions, invite the key-speakers and select oral/poster contributions. Finally, the topics selected for the third **MAG-EL-MAT** Meeting are nanostructured semiconductors, alloys and metals, magnetism in intermetallic compounds and semiconductors, structure and magnetic properties of thin films, electronic transport and spin-polarized transport and quantum coherence in mesoscopic systems.

It is our hope that the meeting and its leading topics will raise interest among the participants and trigger off further contacts, new forms of scientific collaboration and joint research projects. I wish all the **MAG-EL-MAT** members, participants of the Meeting many fruitful discussions and much satisfaction as well as a pleasant and memorable stay in Będlewo and its environs.

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Bogdan Idzikowski