

Aveiro, June 29th, 2010

**Report of the Scientific Guiding Committee for Institute of Nanostructures,
Nanomodelling and Nanofabrication (I3N)**

The Institute of Nanostructures, Nanomodelling and Nanofabrication (I3N) gathers three research centers working in fundamental and applied science dedicated to Nanomaterials and nanotechnology: IPC (Institute for Polymers and Composites from University of Minho), CENIMAT (Materials Research Center from the New University of Lisbon) and FSCOSD (Physics of Semiconductors, Optoelectronics and Disordered Systems from the University of Aveiro). The total number of researchers is about 240, with more than half of them hold a PhD degree and the rest is constituted by postdoctoral fellows (PDF), Ph.D students, engineers and technicians. The main relevant research domains of the I3N are dealing with:

- Fabrication and characterization of semi-conductor nanostructures and nanodevices
- Polymer-based nanocomposites and industrial-scale oriented processing
- Flexible electronics and opto-electronics

The management of I3N is ensured by the direction board that involves the coordinators from the three involved entities. The management involves also the External Council, the Scientific Council and the Management Commission. The strategic scientific and management plan is assessed by an external Scientific Guiding Committee.

The main objectives of I3N is to strengthen the research work undertaken by the three entities and ensure a critical mass on specific projects to have regional, national and international impact. I3N is also aimed at developing high profile network and joint degrees; join the efforts on common projects for high level scientific production and technology transfer to regional and national industrial sectors along with high quality training and efficient organization of scientific events.

The guiding committee is made of Profs. F. Briones, M. Aegerter, J.R. Morante and M. Bousmina.

On June 28th, Profs. Aegerter and Bousmina visited in the morning the CENIMAT in Lisbon. After presentations by the various research groups, the Scientific Guiding Committee team visited the various laboratories and discussed with the different researchers on several issues related to the

strategic plan, the research projects and on the management procedures. Profs. Morante and Briones did the same thing in Minho.

During the afternoon, the whole Scientific Guiding Committee met in Aveiro and attended the presentations of the various groups working at FSCOSD center and discussed with them on scientific and management issues.

On June 29th, the Scientific Guiding Committee met again with the I3N coordinators and attended to the presentation by Prof. Armando Neves. Then the Scientific Guiding Committee met in a close meeting to discuss the strengths and weaknesses of I3N and make the required recommendations.

The committee appreciates the strong will of I3N members to collaborate in a synergetic manner within the I3N framework, to gain critical size, visibility and to put down the historical barriers due to geographical distance and institutional differences. The committee feels that there is a large potential for I3N to reach its goals in terms of forming a critical mass of researchers able to share their respective expertise and infrastructure for the benefit of the development of Nanotechnology in Portugal.

It is also worth to point out the importance of the involvement of the three universities for highly qualified personnel training and the strong link of the laboratories with national industry through engineering know-how and technology transfer.

The committee appreciates the world-class reputation of I3N members, in particular IPC in the field of Polymer processing and polymer composites and nanocomposites and integration of optoelectronic devices with conducting polymers using cost-effective processes, CENIMAT in the field of nanodevices, flexible opto-electronics and e-paper and FSCOSD in the field of characterization and modeling of nanostructured materials.

I3N initiative is worth for Portugal strategy for Nanoascience and Nanotechnology due to the peculiar specificity of the ongoing projects and the strong link with industry through market-oriented type of research, which is complementary to the other initiatives in the field. This is also the right occasion to build on international reputation of I3N members and the European recognition such as European Research Council grant given to one of the researcher of CENIMAT.

In the view of the clear potential of the various groups, the committee strongly encourages I3N members to put in place a limited number of well focused projects with the possibility of integrating their respective expertise, which will help I3N to gain more visibility and impact at national, regional and hopefully international levels.

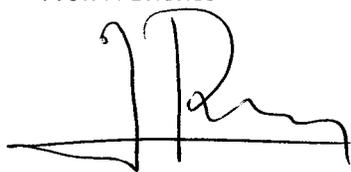
It is highly recommended that FCT provides more substantial help in terms of budget, simplified rules and additional personnel to allow the I3N network to have important strategic and scientific driving force similar to the other networks in Europe such as "Poles de compétitivité" in France, Nanospain in Spain among others. It is more pertinent for Portugal to identify only few strategic areas and substantially sustain the associated networks, rather than splitting the budget for all research groups without the possibility of seeing strong groups merging at national, regional and international levels.



Prof. F. Briones



Prof. M. Aegerter



Prof. M. Bousmina



Prof. J.R. Morante