NIMP IN 2007

National Institute for Materials Physics - NIMP (Romania) is one of the main research institutes in Romania. The general goal of the NIMP is to conduct high level basic and applied research in some selected areas of Solid State Physics and Materials Science.
NIMP develops as a CENTER OF EXCELLENCE for international cooperation (R&D projects and networks with support for EU, bilateral agreements) and high-level education (PhD, MSc, postgraduate –training courses) and provides a frame for interdisciplinary research in the materials science. The NIMP finances the major part of its activities through National R&D Programs promoted by the Romanian Ministery for Education and Research . However, a part of the activity of the Institute is conducted through an important number of academic grants and projects funded by EU programmes. The institute has presently about 216 workers, including 128 scientific researchers (**15 PhD supervisors, 103 doctors, 28 PhD students, 10 Master students**), 41 research assistants and 47 administrative personnel.

Laboratories and main research directions:

- Advanced Materials for Special Applications
- Low Temperature Physics and Superconductivity
- Physics of Semiconductor Materials and Complex Structures
- Solid State Magnetism
- Low Dimensional Systems
- Optics and Spectroscopy
- Oxidic Materials
- Structure and Dynamics of Condensed Matter
- Microstructure of Defects in Solid Materials

International cooperation:
Over **50 joint research projects** are run at the Institute in co-operation with foreign centers .Currently **12 international projects** are financed from abroad, including **9 projects financed by EU** within the Framework Programs. Many projects have been included into the international scientific and cultural agreements at government level There are also **over 40 research projects** included into **bilateral agreements** between the Institute and partner institutes from abroad.

Publications and scientific performance :
More than 150 contributions are published every year, mostly in ISI international journals and several patents are registered. In summary, the scientific rate reflected by publications in the last five years show that NIMP has a rate of 3.5 times higher than any other research unit in Romania. NIMP co-edits the quarterly Journal of Optoelectronic and Advanced Materials (JOAM), the only scientific journal in Romania devoted to advanced materials physics which is recognized by the Institute for Scientific Information in Philadelphia .

The site www.ad-astra.ro has published : "THE WHITE BOOK OF ROMANIAN RESEARCH" which represents the results of a inventory project of ISI papers published by romanian research units in various scientific fields in the period 2001-2006.
In general classification of national institutes, NIMP has a second place after IFIN-HH in the mentioned time range. Norming at the research personnel figures leads evidently to a dominant NIMP leadership.
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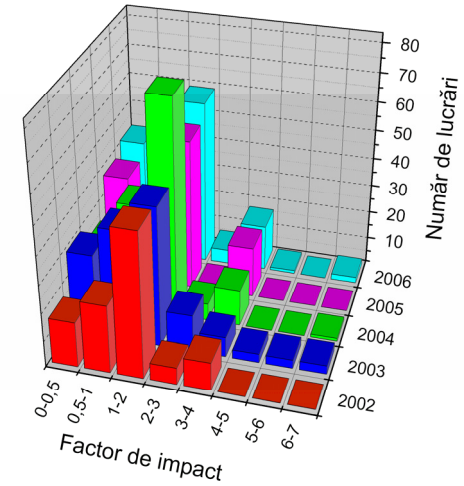
The following diagram shows not only a quantitative increase of the number of ISI papers published in the period 2002-2006 but also a corresponding increase of their quality by growth of cummulated impact factors associated to these ISI journals.



NIMP is a top Romanian research institute in the field of advanced materials, functional materials and nanostructures. This was proved by a project performed by The Centre for Science and Technology Studies (CWTS), Leiden University, Holland, and The Fraunhofer Institut fuer Systemtechnik und Innovationforschung (FhG-ISI), Karlsruhe, Germany. and supported by the EU Community made to identify the centres for excellence and competences from Europe in the field of nanoscience and nanotechnology. The results are published on the CORDIS site (www.cordis.lu), at the link "Mapping of excellence/Nanotechnology". With respect to this study, an excellent institution has high values of the bibliometric indicators CPP (citations per publication) and CPP/FCSm ("crown indicator"). The last indicator is related to the average impact compared to the average number of citations of the domain and gives the best measure of the relative impact of the published papers. It is calculated as the average number of citations per publications (CPP) divided to the average number of citation per publication in the domain to which the publication is addressed (FCSm).
NIMP is one of the few institutes with both indicators higher than 1, but it is the only one that has the condensed matter physics and materials science as field of activity, including multifunctional materials and nanostructures. A comparison with the other countries from Central Europe (Czech Republic, Hungary, Poland, Slovakia and Slovenia), recent EU members, shows that NIMP can be situated on the top levels in the corresponding classifications. **Taking into account the principal indicators (publications, citations**

per publication and crown indicator), our institute is situated on an average position, very honourable, if it is compared with similar institutions from the most advanced (in this specific field) countries as Germany, Netherlands and France.
The results of this study show that the research activities from NIMP are well appreciated and recognized at international level, mainly through scientific publications.

Project financing and new infrastructure
The NIMP funding in 2007 is about 8,5 million Euro (54% projects from Competiton for Excellence , 35% Core Programme, 6% Second National Programme) obtained in various programmes promoted by the National Agency for Science, Technology and Innovation (ANSTI). In the last years an important financial effort was made to acquire new infrastructure facilities (some examples are given in the first pages of this Annual Report). In this aim, an important contribution was given by our administrative departments providing in due time all financial and legal documents necessary for equipment auction.

This report referred to as "NIMP Annual Report 2007", available in English, published from 1996, is our main report for 2007 and includes detailed information about NIMP laboratories, main research directions, recent scientific results, published papers and participation at scientific congresses and conferemces.