Project title:

Modern Instrumental Methods and Techniques for Chemical Analysis

Acronym:

- MIMTECA -

Project Director:
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Objectives:

- As a general objective, the project aims to assure the research infrastructure development in order to provide an open access of researchers to high performance equipments.
- Among the specific objectives of the project, it can be mentioned the research infrastructure development in „Petru Poni" Institute of Macromolecular Chemistry, considering the research resources' potential in regional area to create optimum conditions for participation in international research programmes.
- It will be assured:

  - the improvement of research capacity and its ability to use and to provide specialized technological and scientific facilities for high technology domains

  - the increase of the level in use of public research infrastructure with extending the research structures for multiple users

  - it will be reduced the existing difference of the development level between Romania and the other UE country members.
- The project will assure the extending of evaluation capacity for the Nano-structures Testing and Characterization Laboratory LAMINAST accredited according to SR EN ISO/CEI 17025: 2005 CERTIFICATE LI 708/06.10.2008 by providing with high performance analysis equipments thus contributing to the increase of both competitive level from the economic viewpoint and quality and efficiency of research-development activities performed in the institute.

Acquired equipments

- SisuCHEMA Hyperspectral Imaging Workstation AS equipment with the capacity of chemical analisys and the facility of chemical surface imaging
- A system of equipments using three different techniques: thermal analysis (simultaneous thermogravimetric and differential scanning calorimetry analyses model STA 449F1 Jupiter (Netzsch – Germany), Fourier transform infrared spectroscopy (Bruker Vertex 70 spectrophotometer) and mass spectrometry (QMS 403C Aëolos model Netzsch – Germany)
- Electrokinetic Analyzer for Solid Surface Analysis: SurPASS (Anton PAAR)
- Johnson Matthey Balance (MSB) for determining the magnetic properties of paramagnetic or diamagnetic solids as well as liquids at the room temperature

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Advantages

- Increase of the capacity to accumulate knowledge, results and experience in a high-level frontier scientific area of structures characterization, as well as that of dissemination possibilities to transfer results to the economic medium
- Concentration and optimal exploitation of the scientific potential of our research team
- Creation of new research and development networks based on the existent analysis and characterization equipments system and moving forward the technological integration process of economic agents that will benefit from the opportunities offered by the new equipments
- Increase of the capacity to find and collaborate with performance partners in scientific and technical collaboration programs and international technological alliances.