

INL researchers to start work in Braga, northern Portugal, by the end of 2010



In 2005 Spain and Portugal wanted to create a global centre of excellence in applied nanotechnology research attracting the world's best scientists and engineers. Their governments established an internationally renowned applied nanotechnology research laboratory International Iberian Nanotechnology Laboratory (INL) due to open in late 2010 in Braga. This aims to positively impact on the region's competitiveness, promote qualified employment, developing new businesses and the relational model Administration/INL/Company/University.

This project falls under Priority 1 of the Programme Cooperation and joint management for the improvement of competitiveness and the promotion of employment – constructing the INL is co-financed by €30m from the European Union's ERDF (European Regional Development Fund).

The INL is an international institution created to foster interdisciplinary research in nanotechnology and nanoscience. As a private, non profit organisation, the INL will provide a high-tech research environment encouraging an interdisciplinary effort in addressing major challenges in nanomedicine, nanotechnology applied to environmental & food control,

nanoelectronics, and nanomachines and molecular manipulation at nanoscale. The facility occupies over 47,000 square meters, with 20,000 of that exclusively dedicated to science.

A recent contract signed with the Comissão de Coordenação e Desenvolvimento Regional Norte allows INL to benefit from an additional €17M of assistance from Portugal's Northern Regional Operational Program "ON.2 – O Novo Norte", co-financed by the ERDF.

The sophisticated equipment to be installed during 2010-2011, includes clean room equipment (E-beam, laser & mask aligner tools, a CD SEM, deposition and etch equipment, allowing to process up to 200mm diameter wafers). The high accuracy labs will include two aberration corrected electron microscopes, an ultra high resolution SEM, a Dual Focused Ion Beam System, X-ray Photoelectron Spectroscopy (XPS), and Scanning Probe Microscopy (SPM). A set of NMR tools for solids (600MHz) and liquids (450 kHz) is under consideration. This set of central labs is completed by a central biochemistry laboratory and a packaging laboratory. These facilities will encourage developing methodologies to enhance an ecosystem for spin offs and integrating the INL into knowledge networks.

After this project's completion, the cross-border region will benefit from competitive technological infrastructure, increasing the competitiveness of regional businesses, universities and technological centres internationally. The local environment for spin-offs and technological centres to emerge and survive will also improve.

INL aims to become a vital part of Europe's scientific area setting an example in new types of research collaboration between EU Member States. Its facilities will be open to future members from European and non-European states, and foster international co-operation with other regions like North America, Latin America and Asia.

The INL challenge is not only to assure research excellence, but also shift its output into economic and social development. INL must be at the cutting edge of Public-Private Partnership (PPP's) models and Technology Transfer activities facilitating and accelerating innovative technology transfer from research to industry by working closely with industrial partners in the INL research areas to develop new diagnostics, drugs, machines, devices and therapies.