

## **INL next decade - a general perspective and a specific look at INL's energy research**

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The decision to create an International Research Laboratory, taken by the Spanish and Portuguese Governments in 2005 led to the International Iberian Nanotechnology Laboratory (INL), which started operations in 2011 in Braga, Portugal. With the first four years dedicated to the installation of equipment and building up the research and administrative personnel, INL enters now into the next decade with ~100 scientists and technicians dedicated to perform world class research and development in four research areas, health, food and environment, information and communications technology, and energy. In the future, a strong portfolio in these research areas will be developed. In addition, INL will provide services to the international community through its six competence centers: nanofabrication, nano-synthesis, high-resolution imaging, bio-photonics, life-science characterization, and sensor&systems centers.

The presentation will give a more detailed insight on the different research and development activities in the energy research area. Here, materials research is developed in the field of renewable energy harvesting from the sunlight. Two approaches are followed in-depth, solar water splitting and photovoltaic energy conversion. In both activities a special focus is given to the potential of incorporating nanomaterials or nanostructures into power conversion devices. The recent progress in these areas is presented in several specific examples.