

## New Nanotechnology Centre for Innovative Materials (EAgLE)

Ewa Jędryka, Tomasz Dietl, Krystyna Jabłońska, and Leszek Sirko.

Institute of Physics, Polish Academy of Sciences, Warsaw 02 668 , POLAND

E-mail: [projects@ifpan.edu.pl](mailto:projects@ifpan.edu.pl)

The poster presents a new centre of nanotechnology research at the Institute of Physics, Polish Academy of Sciences (IF PAN), currently under the development in frames of the REGPOT project EAgLE (full name : European Action towards Leading Centre for Innovative Materials). The project aims at establishing a leading multiprofile research Centre for designing and fabricating new materials, their characterization and testing under extreme experimental conditions. The Centre will identify and select novel materials, structures, phenomena, and computational protocols for functional new-concept nanodevices.

The Centre benefits from twinning with 16 partnering institutions having sound expertise in the field of materials fabrication (e.g. MBE, chemical synthesis, lithography, FIB), characterization (e.g. XPS, TEM, EELS, synchrotron – diffraction and spectroscopy, NMR), nanodevice design and testing (e.g. semi- and superconducting electronics, cryogenics, computer simulations).

An important development is the purchase of an X-Ray Photoelectron Spectrometer (XPS), making it possible to perform element specific and chemical sensitive characterization of materials with 3D resolution. Another essential acquisition is a cryogen-free dilution refrigerator, opening new opportunities to follow properties of the materials and devices down to a few miliKelvins.

One of the goals of the Centre is the exploration and standardization of user-friendly computational methods for materials design and for modelling of functional properties and nanodevices, including code validation and benchmarking, available also to external users.

The REGPOT project is also committed to rising the awareness of IF PAN researchers to the issues of intellectual property, licensing, and patenting, in order to improve the transfer of innovations to new spin-offs, SMEs, and industry.

This project is a Support Action financed by the EU 7th Framework Programme under the CAPACITIES project REGPOT-CT-2013-316014 .