



Post-Doc position for the *in situ* nanostructure growth experimental end station *INS* on the synchrotron beamline BM32 ESRF/CEA Grenoble.

Description

The *INS* instrument of the BM32/Interfaces synchrotron beamline at the ESRF is dedicated to *in situ* growth of semiconductor and metal nanostructures. It uses hard x-rays in the energy regime from 7 to 30 keV, to follow fundamental aspects of epitaxial growth of nanostructures employing grazing incidence small angle x-ray scattering (GISAXS) and grazing incidence diffraction (GID), *in situ*, during the growth. Its highly versatile growth chamber can be equipped with several solid source evaporators for metals and semiconductors, as well as with gas sources of (di)silane and (di)germane for UHV Chemical Vapor Deposition catalytic growth of nanowires.

Your main research subject will be centered on the investigation of the structural properties of Si and/or Ge nanowires during their growth by UHV-CVD, but you will also be associated, in the framework of project funded by the French Research agency, to the second main in house research subject, focused on epitaxial graphene on metallic surfaces; its moirés and organized magnetic nanoparticles on them.

You will share your time between a research activity on the above subjects and a role of local contact on the growth chamber and the beamline.

You will be employed for one year – renewable one more year- by the CEA-Grenoble who is running the Beamline BM32 at the European Synchrotron Radiation Facility (ESRF) in Grenoble.

The ESRF is one of the brightest x-ray sources in the world and a research site shared with several other major European scientific institutes. It offers a highly dynamic, exciting and multinational working environment in the French Alps.

Qualification/ Experience

The candidate should hold a PhD degree in Physics or Chemistry and have some experience with complex instrumental environment and epitaxial growth methods; preferentially UHV-CVD or CBE.

A background in the use of X-ray diffraction or other scattering methods will be an advantage.

If you are interested, please contact and send a CV and letter of motivation to Gilles Renaud Gilles.Renaud@cea.fr

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Application deadline: October 1st, 2012.

Web sites: www.cea.fr; www.esrf.eu/UsersAndScience/Experiments/CRG/BM32/; www.minatec.org/; inac.cea.fr

SP2M

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