



# Seminar Announcement

## Martinez-Criado Gema, Senior Researcher

Consejo Superior de Investigaciones Cientificas - Instituto de Ciencia de Materiales de Madrid, Spain

### Characterization of materials at the nanoscale using hard X-ray microspectroscopy techniques

Wednesday, 14 November 2018, h. 14.00

Sala Wataghin, Physics Department, via P. Giuria 1, Torino

#### The speaker



Gema Martinez-Criado received her Ph.D. degree in Physics from University of Valencia in 2002. From 2002 to 2016 she worked as a scientist in the European Synchrotron Radiation Facility (ESRF) located in Grenoble (France) dealing with topics related to semiconductor materials and nanostructures. She is currently a senior researcher at the Spanish National Research Council (CSIC) in The Materials Science Institute of Madrid (Spain). Her research focuses on the exploitation of synchrotron X-ray nanobeams in materials science.

#### Summary

Hard X-ray spectromicroscopy techniques are key tools with relevant applications across multiple fields. In this presentation I briefly describe how these tools are implemented and used nowadays for the characterization of heterogeneous materials at the nanoscale. In addition, the essential role of the associated instrumentation for reliable 2D and 3D data acquisitions with nanometer spatial resolution are shortly presented. Finally, few examples exemplify the potential of hard X-ray modalities to provide new insights into hybrid perovskites for solar cells and nanowires for light emitting diodes.