



The supervisory board of the Kestcells Project announces the Seminar UAM:

“Ion matter interaction and ion beam analysis”

**Dates:** 8<sup>th</sup> May, 2014.

**Place:** Centre for Micro Analysis of Material, Faraday, 3 - Edificio 22, Campus de Cantoblanco Universidad Autónoma de Madrid, 28049 Madrid, Spain

**Abstract:** Ion beam analysis (IBA) refers to a set of analytical techniques emerging from the interaction of an incident ion beam produced by an ion accelerator and the sample under analysis. Typically an electrostatic accelerator producing MeV ions is used for these purposes. Most of the IBA techniques rely on nuclear interactions which specifically identify the kind of nucleus present in the sample. Techniques with acronyms such as RBS or BS, ERDA, Channeling, NRA , or PIGE exploit a direct nucleus-nucleus interaction. Others, as in PIXE, IL or STIM, an atomic interaction character rather than the nuclear is the responsible for supplying the identifying information through the electronic structure of the sample atoms. In all of the IBA techniques a precise knowledge of how an incident particle loses its kinetic energy as it penetrates into the sample is of paramount importance to determine the accurate elemental composition of the sample under analysis, or the possibility to determine depth profiles and the depth resolution, or the sensibility limits for the detection of specific elements. The talk will give a general overview of these effects of ion matter interaction on the IBA techniques.

**Program**

Time	Subject	Speaker
12:00-12:15	Introduction	Aurelio Climent Font
12:15-13:30	Ion matter interaction and ion beam analysis	