

Seminar: May 31 at 9:00 in OFLG 402

**MICROPROBE TECHNIQUES (SIMS, LIBS, LIMS) FOR DIRECT ANALYSIS OF
CONDENSED PHASE**

Professor J. M. Vadillo,

Department of Analytical Chemistry, University of Malaga, Spai

Photons and ions, properly focussed, represent powerful tools to interrogate samples in condensed phase combined with a large arsenal of different detection systems. Among all of them, optical emission spectroscopy and mass spectroscopy are the most widely used, under the name of the acronyms SIMS (secondary ion mass spectrometry); LIBS (laser-induced breakdown spectroscopy; and LIMS: laser ionization mass spectrometry).

Every one owns virtues and flaws that must be considered when facing the challenge of performing analytical spectroscopy of samples in condensed phase. However, in general, the three techniques represent the most straightforward way (not cheap, though) to perform a quick survey of a sample composition in any of the different sampling ways of surface analysis: point analysis; rastering; two-dimensional analysis, and tomographic one.

The talk will cover different aspects of the three techniques, with selected examples in different topics (materials science; environmental; patrimonial and archaeological among other) that will highlight their strengths.