avviso seminario da parte di Anna Maria Fioretti

Submitted by Floris Mario on 8 June, 2016 - 14:23 Comunicazioni agli studenti

Quantitative Microanalysis with Electron Probe SXFive

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Martedì 14 giugno 2016 - ore 11.00

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AULA 2H

CAMECA, leader in scientific instruments, has been manufacturing Electron Microprobe

(EPMA) since 1958. An introduction on the history of CAMECA from the 1958 to today?s SXFive

will be presented.

Thanks to its precision, its reproducibility and its stability, Electron Microprobe is a well suited

technique for accurately analyzing nearly all chemical elements at concentration levels down to

few 10?s ppm with a spatial resolution of about 1 ?m, which is relevant to microstructures in a

wide variety of materials and mineral specimens.

The basics of the EPMA will be reviewed. The different types of detectors used to analyze

samples and perform quantitative analysis such as wavelength dispersive spectrometers (WDS)

or Energy dispersive spectrometers (EDS) will be compared.Typical EPMA SXFive outputs and

results will be shown from various domains such as geology, metallurgy and materials

science.

With the development of the Schottky emitter and its implementation as electron source in

Electron Microprobe, small features are commonly analyzed down to sub-micrometer scale. The

challenges and usage optimization of such sources will be reviewed. The use of low-energy Xray

lines for quantitative analysis presenting new analytical challenges will also be reviewed

briefly.

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Attachment	Size
Seminario_Moret.pdf	53.18 KB

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