

Poster Presentation

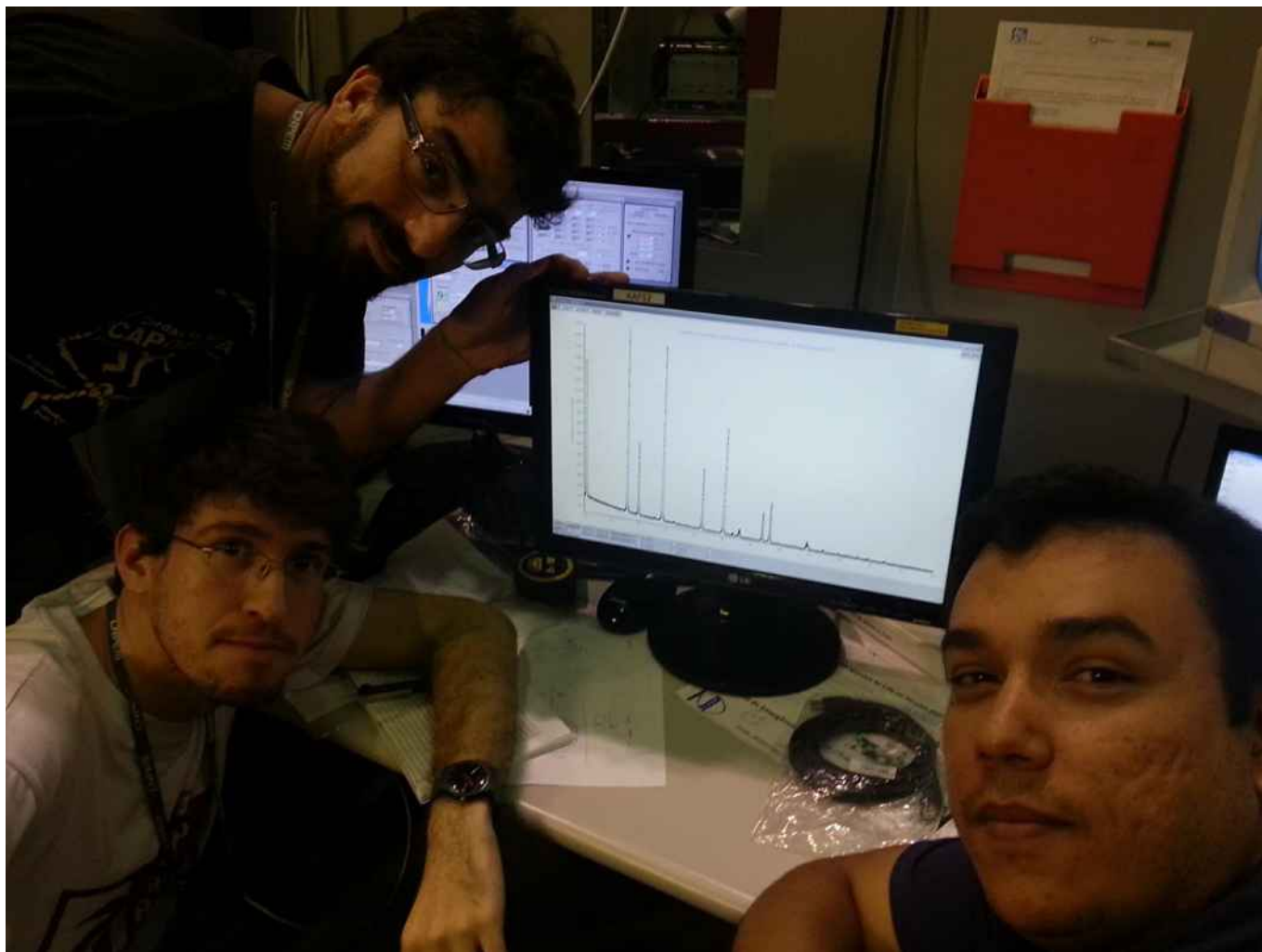
MS84.P03

Doing Diffraction in an Absorption beamline

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During the summer school program on the Brazilian Synchrotron Light Laboratory we adapt the XAFS2 beamline to do Diffraction experiments. This instrumentation work allows us to open a new window on the usual XAFS experiments, which is specially useful for combine the techniques obtaining information on short and long range order. We explore both techniques performing in situ studies with a capillary microreactor [1] exploring the hydrogen desorption on metal hydrides (MgCo compounds) during a thermal treatment under helium atmosphere. The possibility to change between XAFS and XRD experiments in a few minutes and following the desorption with a mass spectrometer give a complete picture of the changes in the material under operando conditions. This is a very promising combination to explore catalysts or functional materials increasing the research possibilities of the beamline.

[1] S. J. A. Figueroa, D. Gibson, T. Mairs, et al., *J. Appl. Cryst.*, 2013, 46, 1523-1527



Keywords: XRD, XAFS, In situ studies