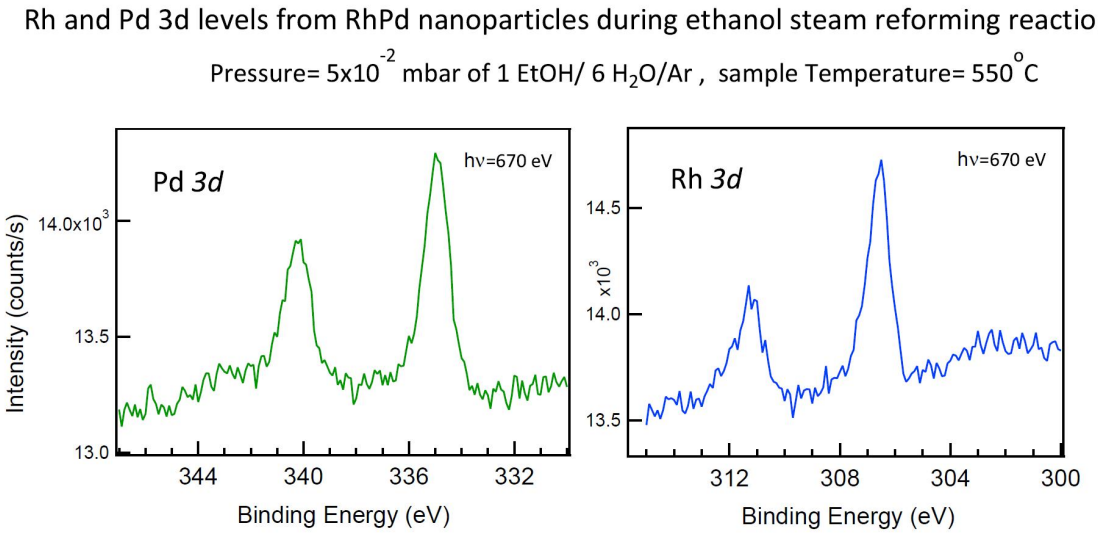
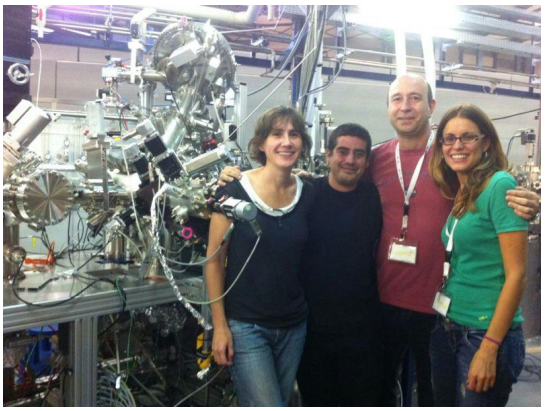
First commissioning users at Near Ambient Pressure Photoemission (NAPP) endstation.

The Near Ambient Pressure Photoemission spectroscopy branch at CIRCE received its first friendly users in September 2013.
The aim of the experiment proposed by Prof. Jordi Llorca and PhD student Núria J. Divins from the Institute of Energy Technologies at UPC, Barcelona, was to investigate the electronic structure of 3 nm-sized RhPd nanoparticles supported over CeO_2, during the ethanol steam reforming reaction to produce hydrogen.

After the catalyst activation by means of oxidation-reduction cycles, the ethanol-water mixture was introduced in the NAPP analysis chamber using a bubbler connected to the chamber through a leak valve.
The evolution of Rh and Pd 3d core levels during the activation and reaction steps at sample pressures of $5x10^{-2}$ mbar and sample temperature of 550 ^{o}C was monitored by in-situ XPS.





From left to right, beamline scientist V. Pérez-Dieste and beamline postdoc C. Escudero with users Prof. J. Llorca and PhD student N. J. Divins.