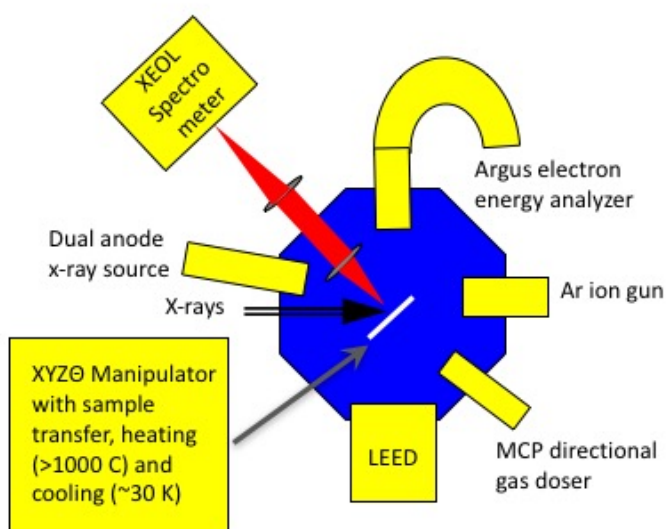


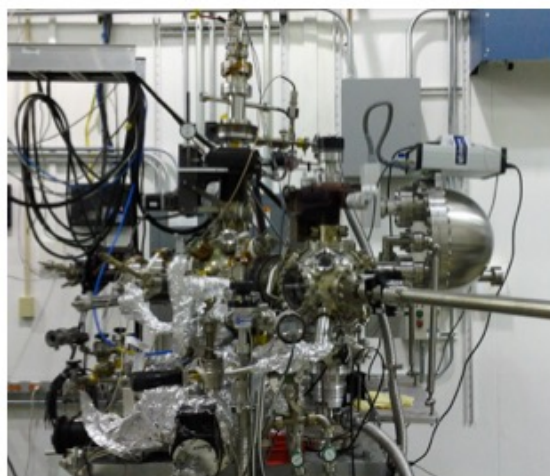
## APS 4-ID-C XPS end station

The XPS end station is a UHV chamber (base pressure  $\sim 1 \times 10^{-10}$  Torr) equipped with a load lock chamber and a variety of surface analysis components. A schematic diagram and picture of the end station is shown below.

Schematic diagram of the XPS chamber setup



Picture of the XPS chamber (off line). The Argus analyzer is on the right and is located at 90 degrees from the direction of the x-ray beam.



Available Omicron style sample holders, from left to right: Standard; Integrated thermocouple; Integrated thermocouple with hole; Biasing across surface or from surface to ground. All are made from molybdenum.

In addition to the electron energy analyzer the end station is equipped with an Ar ion sputter gun, LEED, a microchannel plate directional gas doser, a lens system for extracting visible light to be analyzed by an x-ray excited optical luminescence (XEOL) spectrometer, an Ir filament that can be used to crack oxygen (and perform crude charge compensation for insulating materials), and a dual anode Mg/Al x-ray source. The sample transfer system is based on Omicron style sample holders. Four samples may be mounted in the introduction chamber at one time.