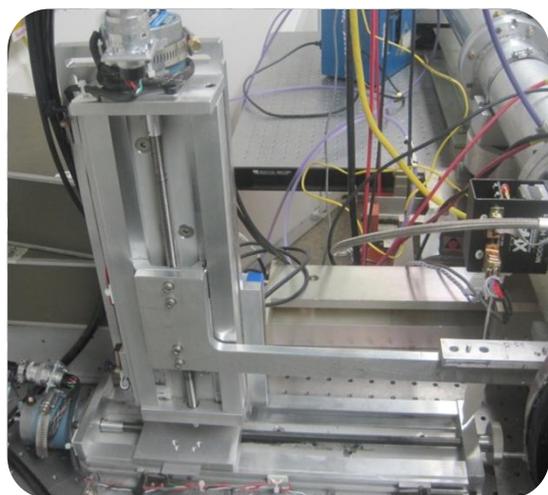


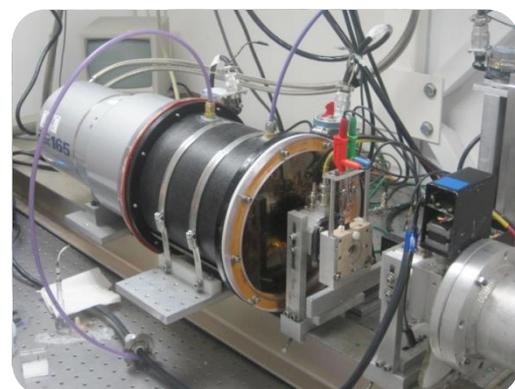
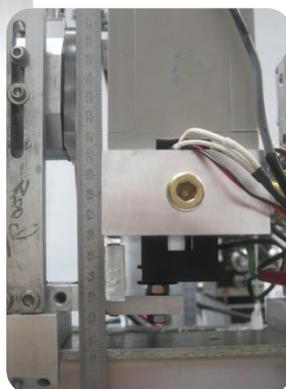
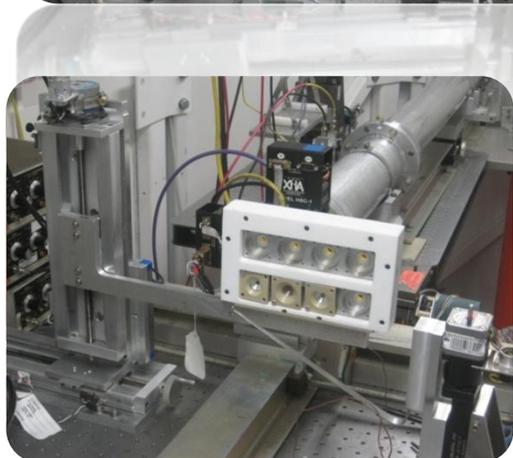
# Beamline 1-4 Sample Environments: Multi-Purpose X-Y Positioner



**Device:** Multi-Purpose X-Y positioner

**Use:** Transmission SAXS studies of solid samples which can be directly attached to the positioner, or as a coupler to a sample environment provided by the experimenter

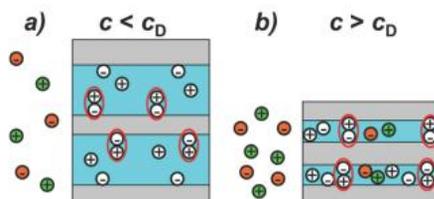
**Capacity:** 240 mm travel in x; 200 mm travel in y and a multi-purpose adaptor arm which can be modified to hold many different environments; examples below are Balsara group's multi-sample heating stage (left) and humidity stage (center) and Strasser group's electrochemical cell (right)



## Showcase Project: Transport in Nanostructured Materials

*K.M. Beers, D.T. Hallinan, X. Wang, J.B. Kerr; N.P. Balsara & J.A. Pople*

Swelling the commercial membrane Nafion in external electrolyte, through use of a humidity chamber, reveals a large fraction of condensed counterions.



Extension of this technique to block copolymers and study how this effects performance of nanoporous media is underway.

