**FIB Model**

1) High vacuum field emission gun (FEG) SEM and Ga-FIB system

2) In situ process monitoring with various detectors: secondary electron/backscattered electron (Everhart Thornley), secondary electron/secondary ion continuous dynode electron multiplier (CDEM), and dedicated backscattered electron detectors

3) Oxfords Instruments energy dispersive spectrometry system for in situ analysis of FIB prepared structures

4) Gas injector modules (Au, Pt, and C GIS) for in situ material deposition and Omniprobe micromanipulator for site-specific lift outs