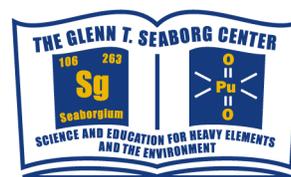




Glenn T. Seaborg Center Seminar



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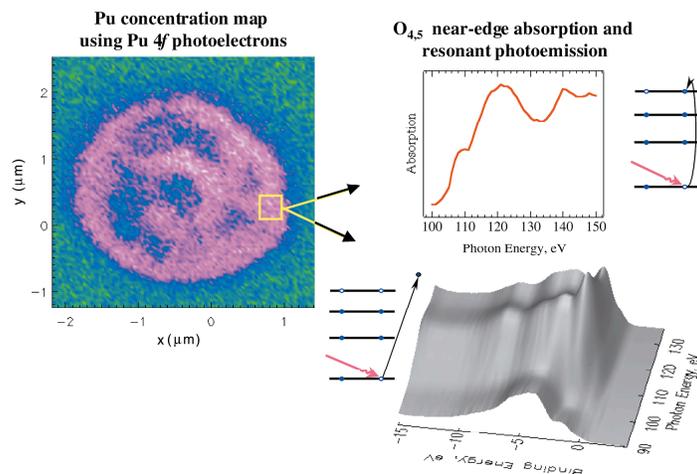
Actinide Science Utilizing Soft X-ray Synchrotron Radiation

Wednesday, June 25, 2003

4 pm

Building 70A-3377

Synchrotron radiation (SR) methods have been utilized with increasing frequency over the past several years to study scientific issues in actinide science, ranging from those of a fundamental nature to those that address a specifically-targeted technical need. The actinide research community has been able to capitalize on SR methodologies for investigations of radioactive materials because of improved radiological safety infrastructure, progress in detector technology, and the capability to perform experiments with small amounts of actinide material. In particular, the emergence of microspectroscopic and fluorescence-based techniques have enabled investigations of actinide materials at sources of soft x-ray SR. The results from SR soft x-ray photoelectron spectroscopy (XPS), x-ray emission spectroscopy (XES), and near-edge x-ray absorption fine structure (NEXAFS) investigations of actinide and actinide-relevant materials systems conducted at the Advanced Light Source (ALS) will be discussed. The characteristics and potential of the ALS molecular environmental science elliptically-polarizing undulator Beamline 11.0.2 for future actinide investigations will be highlighted.



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