

## Workshop Report

On May 15 we held a workshop titled “Synchrotron Techniques in Support of DOE’s Subsurface R&D Effort.

After a brief summary of DOE’s Subsurface Effort, speakers presented current geochemical research that makes use of DOE-BES user facilities (NSLS-II, APS, ALS, SNS). The morning session was capped off with an open discussion in which the close to 30 participants focused on how existing facilities could be leveraged for DOE’s subsurface effort. The afternoon session featured not only two talks centered on subsurface-related research but also a presentation on the current and future capabilities of the SRX beamline at NSLS-II. The afternoon session was capped off with a discussion centered on the question what future capabilities could transform our capability to conduct subsurface-related research.

The discussion in the morning yielded several suggestions related to developing more coordination within the community. Examples included: 1) developing a common set of well-characterized standard rocks or proxies to use for research and 2) development of an overarching research agenda with specific experiments that map onto work plans developed as part of the DOE Subsurface effort.

The afternoon discussion session took a decadal view and identified the need for a better understanding how accelerated experiments can be designed so that they yield meaningful results and the need for a dedicated facility that would allow off-line experiments to be rapidly and repeatedly characterized using synchrotron-based techniques. Particularly various types of tomographic techniques on samples while under P and T are of interest.