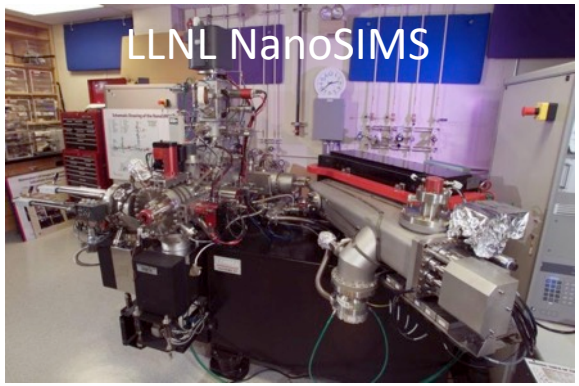
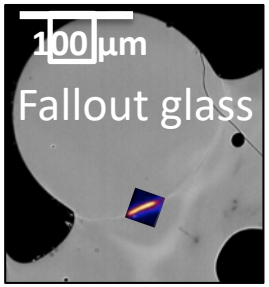
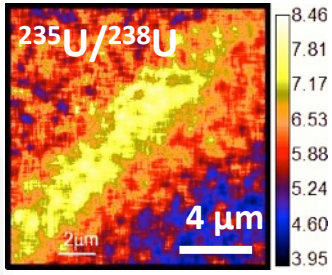
High Resolution isotopic imaging of nuclear, fallout and environmental samples with SIMS

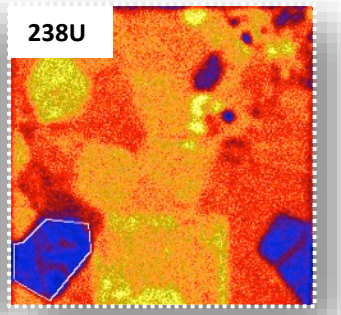
Research Overview

We use secondary ion mass spectrometry (SIMS) to study the distribution and movement of actinides and other materials. NanoSIMS enables sub-micron spatial resolution.









Potential Collaborations

- Nuclear forensics
  - Methods
  - Pre-detonation
  - Post-detonation
- Environmental contamination
- Microbial processes

Previous Dissertations

- David Weisz, Ph.D., UC Berkeley, 2016
- Marcus Keiluweit, Ph.D., Oregon State Univ., 2013
- Lawrence Lewis, M.S., UC Berkeley, 2013
- Haley Klitzing, Ph.D., U. Illinois, 2015
- Mark Tyra, Ph.D., U. New Mexico, 2013
- Robert Wilson, Ph.D., U. Illinois, 2012
- Jessica Frisz, Ph.D., U. Illinois, 2012
- Chris Anderton, Ph.D., U. Illinois, 2011
- John Moreau, Ph.D., UC Berkeley, 2009
- Four Ph.D.s in process

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