

Weber State University Sigma Xi Chapter Presents

**SIGMA XI**  
THE SCIENTIFIC RESEARCH SOCIETY



WEBER STATE  
UNIVERSITY

Monthly Wednesday Science Conversations  
and Physics Seminar Joint Presentation Featuring

**Dr. Maciej Manecki,**  
AGH-University of Science and Technology, Krakow,  
Poland

**Complementary applications of  
AFM and SEM**

**microscopies in environmental studies**

**Lind Lecture Hall 121**

**September 30, 2009**

**Wednesday, 1:30 pm**

**Light refreshments will be served**

Pb-contaminated soils are prevalent in the United States at sites such as small arms firing ranges, detonation sites or testing facilities.

The Phosphate-Induced Metal Stabilization (PIMS™) technology is an *in situ* stabilization technology that uses an amendment of phosphate fertilizers to the contaminated soil that immobilizes the metal without affecting soil permeability. Only recently, complementary use of modern Scanning Electron Microscopy (including environmental mode with imaging, elemental microanalysis and electron diffraction in low vacuum) together with Atomic Force Microscopy (including Environmental Fluid Cell) allowed for advance of our knowledge of the mechanisms of Pb neutralization by these modern reclamation techniques.

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