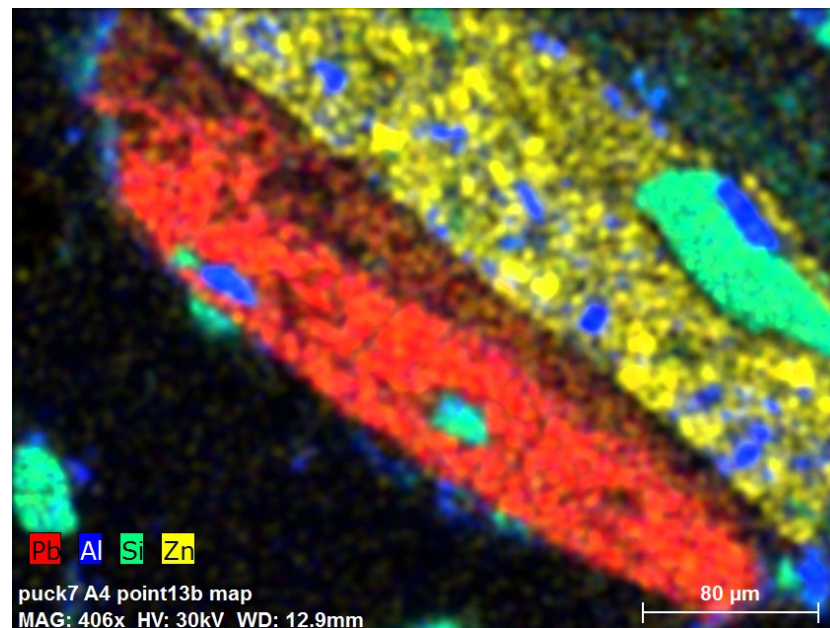


# Lead Contaminants in Soils in Residential Philadelphia Neighborhoods

Lead contaminated soil has been identified and collected throughout the city of Philadelphia using handheld X-ray fluorescence. The contaminated soils were analyzed using SEM / EDS to assess the location, size, and distribution of lead particles, which were observed as fine grains. The particles were targeted for precision FIB sectioning to produce a TEM lift-out cross section of the grain. The goal of this work is to determine the crystallographic and chemical nature of the lead contamination, which may reveal the source, characterize the biological threat, and inform decontamination efforts, if necessary.



*Lead contaminated soils identified using SEM / EDS for targeted precision FIB sectioning, were further analyzed with HRTEM, STEM / EDS mapping and electron diffraction*

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