

Evolution of Silver Nanoparticles in the Rat Lung

Investigated by X-ray Absorption Spectroscopy

R. Andrew Davidson¹, Donald S. Anderson², Laura S. Van Winkle², Kent E. Pinkerton² and T Guo^{1}*

1. Department of Chemistry, University of California, Davis, CA 95616

2. Center for Health and the Environment, University of California, Davis, CA 95616

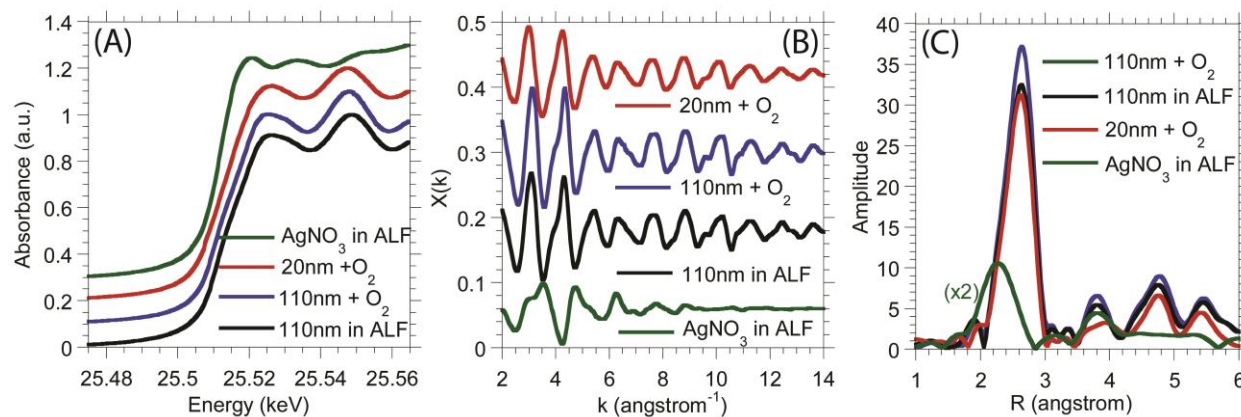


Figure SI-1. XANES and EXAFS data of several reference samples. SI-1A shows the XANES data. SI-1B shows the EXAFS data in the reciprocal space. SI-1C shows the EXAFS data in the real space.

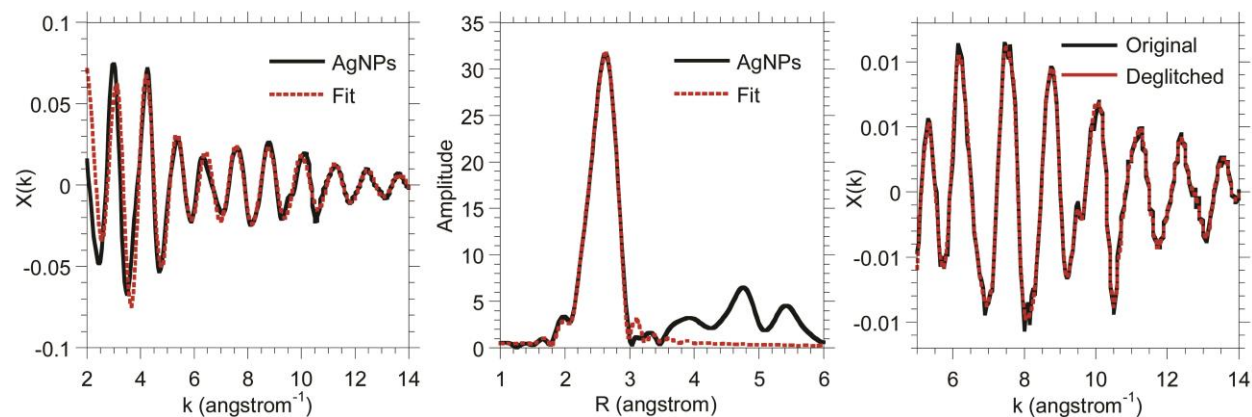


Figure SI-2. Examples of the EXAFS data processing and fitting. SI-2A shows the fitted EXAFS data in the reciprocal space for the peak selected in SI-2B. The data was deglitched, as shown in SI-2C.

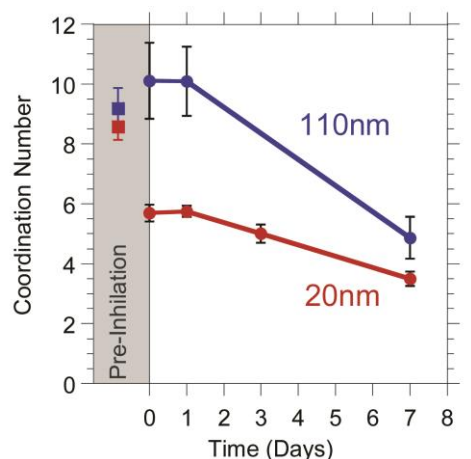


Figure SI-3. Change of N for the 110 and 20 nm AgNPs inhaled by the lungs. The rate of change for 20 nm is slower than that of 110 nm AgNPs, although there is an initial reduction in the N for the 20 nm AgNPs, a process not observed with the 110 nm AgNPs.

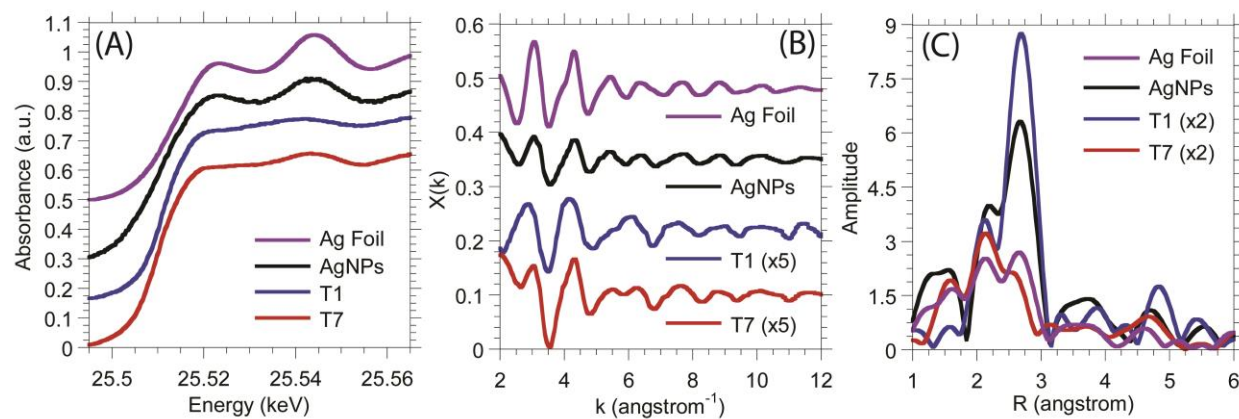


Figure SI-4. XANES and EXAFS data for four samples. SI-4A shows the XANES data, and SI-4B and 4C shows the EXAFS data in the reciprocal and real space.