

# Curriculum Vitae

*Andrew Thomas*

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## Education

**August 2014-August 2016** | University of Arizona, Tucson, Arizona, USA: Master of Science in Environmental Science

- Coursework in geology, soil physics and chemistry, microbiology, analytical chemistry, environmental law, and groundwater remediation.
- Advisor: Jon Chorover, Ph.D.

**August 2009-May 2013** | Washington University in St Louis, St Louis, Missouri, USA: B.S. in Chemistry (biochemistry concentration)

- Coursework in chemistry, biology, physics, economics, and German language.

## Research Experience

**August 2015-August 2016** | Superfund Training Core Fellow, University of Arizona Superfund Training Program, Tucson, Arizona, USA

- Participated in a training program designed to foster collaboration between researchers from different disciplines. Required to present experimental results to diverse audiences and attend others' presentations.

**August 2014-August 2016** | Graduate Research Assistant, University of Arizona, Department of Soil, Water and Environmental Science, Tucson, Arizona, USA

- Completed a research project studying the bioaccessibility of metal (loid) contaminants in weathered sulfide mine tailings.
- Measured kinetics of trace element release from tailings into synthetic biofluids and studied simultaneous changes in mineralogy and trace element speciation using synchrotron-based x-ray diffraction and x-ray absorption spectroscopy at the Stanford Synchrotron Radiation Laboratory in Palo Alto, CA, USA.
- Necessary skills: Aqueous geochemistry, analytical chemistry, anaerobic chamber operation, synchrotron beam operation, processing of data from XRD and XAS experiments, geochemical modelling.

**March 2012-May 2013** | Undergraduate Research Assistant, Washington University School of Medicine, Department of Urologic Surgery, St. Louis, Missouri, USA

- Assisted an experiment at Washington University designing viral vectors for gene therapy treatments targeting blood vessel growth in tumors.
- Responsible for frozen sectioning of mouse tissue samples, staining target proteins using immunohistochemistry, and fluorescence microscopy of treated samples.

**May 2012-July 2012** | Summer Undergraduate Research Fellow, LSU Health Sciences Center-Shreveport, Department of Pharmacology, Shreveport, Louisiana, USA

- Worked full-time as a summer intern at this institution.
- Assisted an experiment developing a viral vector for use in gene knockout studies of neurodegenerative diseases.
- Responsible for gene recombination, plasmid synthesis, and handling of lab rats.

## Professional Affiliations

- Geological Society of America
- Association of Applied Geochemists
- Southern Arizona Environmental Management Society

## Publications

- M.S. Thesis: Thomas, A.N., Root, R.R., Amistadi, M.K., & J. Chorover (2016). “Effect of Oxidative Weathering on *In Vitro* Bioaccessibility of Toxic Substances in Contaminated, Mine Tailings-borne Dusts.”

## Conferences/Presentations

- **Geological Society of America 2015 Annual Meeting, November 2015, Baltimore, MD, USA:**  
Presented “Surface-controlled Ferrihydrite Dissolution Kinetics and Associated Fe and As Release.” (oral presentation).
- **International Applied Geochemistry Symposium, April 2015, Tucson, AZ, USA:**  
Presented a poster on contaminant bioaccessibility in weathered mine tailings.

## Languages

**English:** native speaker

**German:** working proficiency

**Russian:** intermediate proficiency