

Samuel Smith

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EDUCATION

University of New Mexico. Albuquerque, New Mexico.

May 2022

Bachelor of Arts: Chemistry.

3.51 GPA

Bachelor of Arts: Philosophy.

Relevant Coursework:

Completed coursework in Quantitative Analysis, Density Functional Theory, Physical Chemistry, Biochemistry, Organic Chemistry, Physics, Genetics, Cellular and Molecular Biology, Calculus, Statistics, Philosophy of Science.

PROFESSIONAL EXPERIENCE

Research Assistant

Jeff Rack, (PI). Professor,

Aug. 2021—Present

Department of Chemistry, The University of New Mexico.

Albuquerque, NM

- Employed Schlenk line and glove box to prepare air sensitive Fe(II)-polypyridine complexes.
- Designed HTE processes to expedite polypyridine ligand synthesis and scale-up.
- Investigating facile electrosynthesis for Fe(II) coordination complexes.
- Conducted UV-VIS and NMR spectroscopy on Fe(II) polypyridine complexes.
- Prepared samples for x-ray crystallography, ultrafast pump-probe spectroscopy.
- Conducted DFT study on Fe(II) polypyridine complexes at ω B97X-D level of theory.
- Investigating traditional vs. machine learning methods for more accurately predicting the electronic states of metal-centered complexes in DFT.

Research Assistant

Heather Edgar, (PI). Professor,

Sept. 2020—Present

Department of Anthropology, The University of New Mexico.

Albuquerque, NM

- Assisted forensic anthropologist in writing additional \$19,000 grant funding for research into missing and murdered indigenous persons.
- Measured physical landmarks on bone structure to generate data from isosurface render of CT data.

Research Fellow

Paul Livingston, (PI). Professor.

Jan. 2018- May 2020

The Andrew W. Mellon Foundation,

Albuquerque, NM

- Researched methodological, epistemic, and statistical design in medico-legal death investigation.
- Managed over \$10,000 in grant funding to develop research program.
- Presented research findings at various institutions including the University of California Los Angeles, the University of Washington, Heritage University, and the University of New Mexico.

Morphology Technician

New Mexico Office of the Medical Investigator.

December 2018- June 2019

Albuquerque, NM

- Facilitated CT imaging of all decedents, comprising the largest database of death data in the world.
- Communicated in one-on-one meetings with NM legislators the necessity of NM-DID research for the advancement of forensic science and health policy.
- Assisted collection of forensic evidence, toxicological, histological, and serological samples.
- Documented forensic exams and evidence to preserve chain of custody and prepare for legal proceedings.
- Assisted with the conduct of autopsy, including maintaining supplies and instruments, handling, preparing, and recording descriptions of the body, and flushing blood and bodily fluids from the body.
- Assisted with the prosecution, evisceration, and suturing of decedents.

COMPETENCIES

Programming Languages:

- Python, MATLAB, Bash. (Basic proficiency.)

Languages:

- German (B1)