John-Austin Little

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EDUCATION

Colorado School of Mines - Golden | Bachelor of Science
Engineering Physics, Expected in 05/2029

- 30 credit hours of Math/Physics/Chemistry courses as of Fall 2025
- Inductee to the Starzer Scholars
- Inductee to the Grand Challenge Scholars
- Inductee to the FIRST Research Scholars
- President's Scholarship Recipient
- Innovation Fund Recipient
- Extracurricular Activities: Cast in Steel competition team
- Putnam Club Member

PROFESSIONAL SUMMARY

Professional and Detail-Oriented Researcher committed to excellence and self-discipline within scientific team environments. Possesses a strong ability to quickly integrate new conceptual and technical protocols, demonstrated through high-quality literature analysis and hands-on materials work. Highly adept at collaborative problem-solving and delivering reliable results in complex research settings under NDA.

SKILLS

- Laboratory techniques
- Independent learning
- Team collaboration
- Computer programming: Python, C++
- Data collection
- Scientific writing
- Experimental design
- Scientific Communication

EXPERIENCE

UNDERGRADUATE STUDENT RESEARCHER | 08/2025 to Current
Toberer Group for Quantum Materials Discovery - Golden, CO

- Conducted experiments to prepare synthesize samples of novel quantum materials.
- Characterized prepared samples using SEM/EDS, and XRD.
- Trained to proficiently use various pieces of synthesis equipment.
- Kept detailed notes of lab proceedings to deliver summative reports to the head of the Lab, and to the broader lab at monthly meetings.
- Collaborated with team members to develop new methods of ampule production and sealing.
- Trained to operate proficiently in the glove-box, and maintain best-practices to avoid sample contamination.
- Engaged in Journal club dedicated to learning about topological insulators and superconductivity.

UNDERGRADUATE STUDENT RESEARCHER | 10/2025 to Current
Maughan Group - Solid-state and Inorganic Materials Chemistry for Renewable Energy - Golden, CO

- Rapidly reviewed relevant literature to engage PhD student leading the project on research goals.
- Worked with advisors to determine lab hours, sub-projects, and expectations while in the lab.
- Trained on new lab procedures and equipment to ensure proficient and autonomous lab contribution while working with highly air-sensitive compounds.

FRONT DESK RECEPTIONIST | 09/2025 to Current
Arthur Lakes Library - Golden, CO

- Greeted patrons and provided assistance with library services and resources.
- Managed front desk operations, ensuring efficient check-in and check-out processes.
- Maintained accurate records of library materials and patron interactions.
- Utilized library management software to track inventory and manage reservations.
- Responded to inquiries regarding library policies, procedures, and available resources.
- Streamlined re-barcoding process to increase yield-per-hour by 30%.

INTERESTS

I enjoy writing poetry to create time capsules of my favorite moments or scenery, I try to write one per day. I also enjoy listening to various kinds of music while I'm working, working out, or sketching on my work to give myself space to think about an interesting problem.

PROJECTS

Currently working with another first-year student from the Toberer Group on a synthesis platform I designed to allow contaminant free synthesis of phase pure samples featuring cationic materials that would otherwise be difficult or impossible to synthesize with current techniques. The process has required the use of acoustic physics, induction physics, electromagnet design, non-trivial electronic control system design, iterative system design in 3D modeling softwares, and a sophisticated proprietary code-base to digitally interface with the hardware. The project is underway towards the first prototype, scheduled for late October, and has received support and approval from Dr. Kamil Ciesielski.