

Aaron Selnick

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Executive Profile

Engineering professional with materials science and mechanical engineering background, and experience in materials R&D and mechanical design. Experience with sustainability technologies and renewable energy projects.

Education

UNIVERSITY OF COLORADO BOULDER | BOULDER, CO May 2022
Master of Science | Mechanical Engineering GPA: **3.78**

PENNSYLVANIA STATE UNIVERSITY | UNIVERSITY PARK, PA Dec 2018
Bachelor of Science | Materials Science & Engineering GPA: **3.64**

Professional Experience

WIDENER UNIVERSITY

Laboratory Engineer **May 2023 - Present**

- Designed and built vibration apparatus for thermal energy storage and conversion research
- Designed and built exhaust system for wax burnout and handling in support of energy storage research
- Redesigned and retrofitted motion capture gait analysis laboratory to improve modeling and stability
- Overseeing implementation of safety protocols and hazardous waste disposal in all engineering laboratories

NATIONAL LABORATORY OF THE ROCKIES

Graduate Intern, Thermal Energy Systems **Aug 2022 – May 2022**

- Led characterization study of dredged materials for reuse in particle thermal energy storage systems
- Created ducting system and structural components for particle thermal energy storage heat exchanger
- Designed and assembled data acquisition enclosure for thermal energy storage and CSP experiments

Post-Undergraduate Laboratory Intern

Jan 2019 – August 2020

- Synthesized novel superinsulation materials and assessed necessary processing steps
- Performed densification and gas pycnometry on insulating powders to validate packing factor increases
- Conducted compressive and flexural testing and thermal conductivity studies of novel solid insulation materials
- Guided liquid nitrogen boiloff calorimetry for thermal conductivity studies of superinsulation materials

Leadership Experience

WIDENER UNIVERSITY

SURCA (Summer Undergraduate Research and Creative Activities) Advisor **June 2025 - September 2025**

- Advised students on engineering design project creating a seat for school formula SAE car
- Helped define project goals, student design goals, and testing plan
- Used FEA experience to help students execute measurements on design

UNIVERSITY OF COLORADO – BOULDER

Teaching Assistant – Mechatronics & Robotics

August 2021 – May 2022

- Assisted with student lab-time question answering and project execution
- Designed and implemented camera vision ball-tracking system for class project using Python and OpenCV
- Assembled "Rocket League" obstacle course in support of semester-long student robotics project

Skills

- Mechanical Design, Data Acquisition & Instrumentation, Materials Characterization, 3D Printing/Prototyping
- MATLAB, Python, C++, SolidWorks, Autodesk Fusion, Autodesk Inventor, ABAQUS, Arduino, Raspberry Pi, Basic German