

Christopher Blancher

U.S. Citizen

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EDUCATION

B.S. at Georgia Institute of Technology, Atlanta, GA

August 2016 - May 2020

- GPA: 3.93

- Major in Materials Science and Engineering Minor in Physics

Relevant coursework: Materials Characterization, Electronic Packaging Fabrication, Optics, Solid State Physics, Electrochemical Storage, Alloys, Ceramics

Ph.D. at Georgia Institute of Technology, Atlanta, GA

August 2020 - Present

EXPERIENCE

Georgia Tech Research Institute

Summer 2018, Summer 2019

Thin film solar cells for space applications

- Fabricated solar cells, including one that will be launched into space in November
- Optimized parameters of thin film deposition recipes to create better quality thin films
- Implemented a soft annealing step to the sulfurization process, which resulted in an improved composition and grain structure
- Characterized composition and surface defects in thin films
- Characterized optical and electrical properties of thin films

Undergraduate Research

August 2017 - December 2019

Chip Scale supercapacitors with carbon nanotube electrodes and ionic liquid electrolyte

- Designed and executed experiment to test which electrolytes have the highest stability during thermal cycling using a temperature-controlled chamber and cyclic voltammetry
- Created a MATLAB GUI to check for redox reactions and to calculate capacitance, energy density, and power density from cyclic voltammetry curves
- Developed and refined equivalent circuit models from impedance spectroscopy data to determine charge transfer and series resistance, capacitance, diffusion parameters, and nanotube porosity

SKILLS

Laboratory Experience:

Cleanroom experience, Photolithography, Scanning Electron Microscope, X-Ray Diffraction, X-ray Photoelectron Spectroscopy, Impedance Spectroscopy, Thin Film Deposition

Software:

Microsoft Office, MATLAB

LEADERSHIP

Materials Science Undergraduate Student Advisory Council

April 2019 – May 2020

Work with Materials Science administration to address student concerns and improve the program

- Meet with other students and administrators to discuss improvements and problems and their solutions in the School of Materials Science
- Meet with high school students to raise interest and awareness about Materials Science

AWARDS AND REGOGNITION

- Georgia Tech President's Fellowship
- Eagle Scout

Current
March 2015