

Runchen Li

Stony Brook University - 100 Nicolls Road, Stony Brook, NY 11794, USA.

EDUCATION

Stony Brook University & Anhui University

Expected Degree in June. 2025

Bachelor of Science: Physics & Mathematics

Stony Brook, New York, United States

GPA: 3.72/4

SKILLS

- Can use the **Atomic Force Microscope (AFM)** to scan the surface of the sample.
- Can use **Transfer Platform** to make 2D crystal material stacks.
- Can use '**AutoCAD**' and '**DesignCAD**' to design the electrodes.
- Can use **Sputter** and **Electron Beam Evaporation technology** to grow thin film.
- Can use the **Scanning Electron Microscope (SEM)** to write Aline mark and exposure sample.
- Can **lithograph samples: Gluing, Exposure, Development, and Etching.**
- Can use **Plasma Etching** samples.
- Can use **Comsol** to simulate physical phenomena.
- Can use '**NanoScope Analysis**' to visualize data and make graphs.
- Can use '**Origin**' and '**Matlab**' to analyze, visualize data and draw graphs.
- Can use '**Labview**' to designed to simulate test, measurement and control applications.
- Can use **Muffle furnace** to calcined materials.
- Can use '**Python**' to do data analysis and algorithms.
- Can use '**Keil**' to code microcontroller hardware program.
- Can use **HTML** to build website.

INTERNSHIP EXPERIENCE

Professor XuDu's research group at StonyBrook University

June. 2023 - Now

S-226, Physics Building, Stony Brook University

Stony Brook, New York

- Stacking two-dimensional materials and graphene in different combinations.
- Used Comsol to simulate the effect of stress on the material.
- Used AFM to scan the surface of the atom.
- Used Electron Beam Evaporation technology to grow thin film.
- Used 'AutoCAD' and 'DesignCAD' to design the electrodes.
- Used SEM to write Aline mark and exposure sample.
- Lithograph samples: gluing, exposure, development and etching.
- Used Plasma Etching samples.

Professor Xuegang Chen's research group using Labview to complete the magnetoelectric transport program

November. 2022 - November 2023

Laboratory 115, College of Physics and Optoelectronics, Anhui University

Heifei, Anhui, China

- Used the Labview software to complete the programming of data acquisition system.
- Used Origin and NanoScope Analysis to analyze Data.

Professor Xuegang Chen's Sputter NCO research group at Anhui University.

Laboratory 115, College of Physics and Optoelectronics, Anhui University

June. 2022 – September. 2022
Heifei, Anhui, China

- Cutting and cleaning silicon wafers.
- Used Sputter to grow NiC₂O₄ thin film.
- Measured the curve of sample's(NiC₂O₄) resistance with temperature change by cryogenic device.
- Measured the resistivity and hall coefficient of the sample(NiC₂O₄) by Four-Point method.

Prof. Xiaoming Zhang's BOA algorithm research group at Anhui University

College of Physical Sciences, Anhui University

November. 2022 - January 2024
Heifei, Anhui, China

- Using Python to Simulate the Distribution of Aquatic Algae Plants.
- Involved in physical analysis and modeling of aquatic algae plants.
- Used Matlab to visualize data and draw graphs.

Research project on home external environment analysis system by Professor Lei Zhang of Anhui University

College of Computer information Science, Anhui University

October. 2021 – May 2023

Heifei, Anhui, China

- Microcontroller circuit and sensor circuit design.
- Used Python to realized Data reception platform design and hardware detection logic coding.
- Real-world experiments and using Origin to analyze data.
- Setting alarm thresholds and prediction algorithm design.

RELEVANT EXPERIENCE

Stony Brook Institute at Anhui University :

Director of academic style construction of the league organization

May. 2022- May. 2023
Heifei, Anhui, China

- Use excel sheets to process data and organize learning activities.
- Find resources, contact teachers, arrange academic lectures and various science and technology innovation and research competitions.
- Responsible for the calculus contest questions.

TECHNICAL PROFICIENCY

Language: English (Fluent), Mandarin Chinese (Native)

Software: Overleaf (LaTex), Labview, Origin, Matlab, keil, NanoScope Analysis, Pycharm(Python), Adobe Photoshop, Adobe Premiere, Adobe Audition. Inkscape, AutoCAD, DesignCAD.