Run SHI

+86 136 7157 6178 | shriun0127@sjtu.edu.cn | shirun0127@outlook.com | shirun0127@gmail.com | mywebsite.com

 sr-shi | Run Shi

200011 Shanghai , China

RESEARCH INTERSTS

My research interests mainly lie in electrocaloric and elastocaloric cooling(devices and materials) and electrocaloric. I am now focusing on the devices of elastocaloric cooling, exploring its potential for higher temperature difference. I achieve high score in Engineering Material and Fluid Mechanics.I also have a background in PTVs.

RESEARCHS

- **High-k ferroelectric polymers for sustainable electrocaloric refrigeration [⊕]** *Oct 2024 - Now*
  Advisor: Prof. XiaoShi Qian (Forward Interdisciplinary Research Center SJTU) Shanghai, China
  ◦ Preparation of electrocaloric material film (preparation of solutions, plating electrodes, etc.)
  ◦ Measurement of polarity, electrocaloric properties, and dielectric properties of electrocaloric materials

- **Cascade-unit Elastocaloric Cooling Regenerator [⊕]** *Jun 2024 - Sep 2024*
  Advisor: Dr. Jingyuan Xu (Insitute of Microstructure Technology KIT) Karlsruhe, Germany
  ◦ Build 3D models by Creo to build an elastocaloric experimental platform
  ◦ Use Ansys to analyze machine parts to meet strength requirements

- **Three-dimensional rise of CO2 bubble in NaOH solution Dynamic Characteristics Research[⊕]** *Aug 2023 - Mar 2024*
  Advisor: Prof. Qian Wang (Institute of Engineering Thermophysics SJTU) Shanghai, China
  ◦ Design and build carbon dioxide gas release experimental platform
  ◦ Implemented Calibration analysis of different orifice plates for bubble PTVs, Dual view shot of bubbles

EDUCATION

- **Shanghai JiaoTong University** *Sep 2021 - Jun 2025*
  Bachelor Shanghai, China
  ◦ GPA: 3.38/4.30 (Ranking: 25/100) , Junior GPA: 3.75/4.30 (Ranking: 4/100)

- **Karlsruhe Institue of Technology** *Apr 2024 - Sep 2024*
  Exchange Student Karlsruhe, Germany

PROJECTS

- **Trolly for automatic planting of pike seedings[⊕]** *Sep 2023 - Jan 2024*
  Group Leader | Awarded Tencent 'Light' Technology Charity Creation Camp Investment(Top 1%) Shanghai , China
  ◦ Created 3D model, ensuring Feasibility of processing and installation sites
  ◦ Created Physical Mechanical Structures, achieving Hollow drill seedling
  ◦ Applied Physical Mechanical Structures in Desert and keep optimizing

- **Mass testing system design using Labview[⊕]** *Dec 2023 - Jan 2024*
  Group Leader | Top 10% Excellent Group Shanghai , China
  ◦ Created data acquisition, data processing (low-pass filtering, array conversion, 2 waveform intercepts), and conversion of output voltage to quality results to complete the desired goal

- **Intelligent Logistics Handling Robot** *Mar 2021 - Oct 2021*
  Group Leader | Top 10% Excellent Design and Report Shanghai , China
  ◦ Implemented Arduino trajectory, gripping debugging, and project report writing
  ◦ Created mechanical gripper models by using SOLIDWORKS

SKILLS

- **Experimental Skills:**
  ◦ Dual-view field of view construction , Flow meter operation
  ◦ Tensile mechanical testing and temperature measurement of highly elastic Ni filaments
  ◦ Preparation of electrocaloric material film (preparation of solutions, plating electrodes, etc.), measurement of polarity, electrocaloric properties, and dielectric properties of electrocaloric materials

- **Programming:** C++ , Python , HTML
- **Professional Tools:** SOLIDWORKS , Creo , Matlab , Labview , Latex , Ansys , Comsol , UGNX , Find , Arduino
- **Languages:** Mandarin(Native) , English(Tofel 102/120) , German(Basic)

REFERENCES

1. **Dr. Jingyuan Xu**
   Head of "ZEco Thermal Lab"
   Karlsruhe Institute of Technology/Institue of Microstructure Technology
   Email: Jingyuan.xu@kit.edu
   Phone: +49 721 608-24781
   Relationship: [Research Supervisor]