JIANYA WEI

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EDUCATION

ANHUI UNIVERSITY Sept 2020 - Jun 2024
Bachelor of Engineering, Major: Mechanical Engineering
Cumulative GPA: 3.53/5

RESEARCH EXPERIENCE

University of Science and Technology of China Jan 2023 - present
Advisor: Professor Sihui Wang (National Synchrotron Radiation Laboratory)
- Conducted research on DCMS (DC magnetron sputtering) coating of NEG in narrow copper vacuum chambers
- Continued research on the microstructure and adhesion properties of TiZrV film after several activation
- Discussed heating procedure to activate NEG film and setup of bakeout equipment on coated chamber
- Installed gas injection instrument and RGA to measure vacuum properties and lifetime of NEG film
- Used turbomolecular units and sputter ion pump to achieve ultra-high vacuum(2×10^{-8}Pascal)

University of Science and Technology of China Mar 2022 - Jul 2022
Advisor: Professor Sihui Wang (National Synchrotron Radiation Laboratory)
- Attended multi-chambers and ceramic chamber coating experiments
- Learned how to use vacuum leak detector to find the leakage in the vacuum system
- Attended surface cleaning and passivation of copper chamber with chemical methods to improve coating process

University of Science and Technology of China Jul 2023 - Sep 2023
Advisor: Professor Erbao Dong (Institute of Robotics and Intelligent Equipment)
- Conducted summer research on an origami-inspired soft robotic arm.
- Utilized the constant curvature assumption for modeling the robot's position.
- Studied the structure, principles, and mechanics, and testing the performance metrics of robotic arm.
- Explored neural network modeling to link the robot's position with the three tendon motors.

Anhui University Apr 2022 - Jun 2023
Advisor: Professor Yongbing Liu
- Led a team to participate in the National College Student Innovation and Entrepreneurship Training Program on bionic kangaroo robot
- Coded on Raspberry Pi micro controller to do the image processing like achieving face recognition
- Used COMSOL Multiphysics to decide the best design of robot’s jumping leg

University of Illinois Urbana-Champaign Sep 2023 - present
Adivisor: Research Scientist Qiyue Lu (National Center for Supercomputer Applications)
- Learned basic syntax and usage about Julia language.
- Significantly accelerated the computational process by using parallel computing in Julia.
- Explored the implementation of parallel finite element programs in Julia.
- Submitted an abstract in the track of Computational Heat Transfer in Summer Heat Transfer Conference 2024.

PUBLICATIONS

Zhuang Zhao, Wenjing Ma, Xiaoqin Ge, Sihui Wang, Yuanzhi Hong, **Jianya Wei**, Shancai Zhang, Le Fan. "Multi-Chamber TiZrV Coating in OFS Copper Vacuum Chamber for HALF."Chinese Journal of Vacuum Science and Technology. In production. 2022

Xiaopeng Xu, Wenjing Ma, **Jianya Wei**, Xiaoqin Ge,Le Fan, Yuanzhi Hong, Le Fan, Yuanzhi Hong, Xiaowei Xia, Tao Huang, Sihui Wang. "Vacuum Performance of Activated NEG Coatings under Neon Venting". Chinese Journal of Vacuum Science and Technology. In production. 2023

Wenjing Ma, Xiaopeng Xu, **Jianya Wei** , Yonghao Gao, Xiaoqin Ge, Wenli Zhang, Le Fan, YuanzhiHong, Tao Huang, Sihui Wang. "Effect of thermal cycling on microstructure and adhesion propertiesof Ti-Zr-V thin films". Applied Surface Science. Accepted. 2023

Jianya Wei, Qiyue Lu. "A Heterogeneous Parallel Framework With Julia to Solve Heat Conduction Equations Using Finite Element Method". ASME Summer Heat Transfer Conference 2024. Abstract accepted.

HONORS AND AWARDS

- Principal Scholarships, Anhui University 2021
- Excellent Student Cadre 2021
- The Third Prize Scholarship, Anhui University 2022
- The First Provincial Prize in China Undergraduate Mathematical Contest in Modeling 2022
- The Third Prize Scholarship, Anhui University 2023

SKILLS

- Programming: C/C++, Fortran, Python, Julia, R, MATLAB, Linux, Github, Latex
- CAD softwares: Autocad, Solidworks
- CAE softwares: Ansys, Comsol
- English: TOEFL 100 (Reading:28, Listening: 25, Speaking:22, Wrinting:25), GRE 320 (Verbal: 154, Quantitative: 166)