

YUHAO WANG

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EDUCATION

Master of Science, Nuclear Engineering and Radiological Sciences May 2019
University of Michigan, Ann Arbor, MI
GPA: 4.0/4.0

Bachelor of Science, Nuclear Physics June 2017
Lanzhou University, Lanzhou, China
GPA: 4.44/5.0

RESEARCH EXPERIENCE

Project: Biases of Vacancy Clusters and Small Cavities in FeCr Alloy
University of Michigan, Department of Nuclear Engineering and Radiological Sciences
Graduate Student Research Assistant, Advisor: Professor Fei Gao June 2019 – Present

- Using molecular dynamics simulation to calculate the cavity interaction radius and biases for various defects in FeCr Alloy
- Providing atomic-level inputs for cluster dynamics simulations

Project: Ion irradiation effects in transition metal dichalcogenide (TMD) materials
University of Michigan, Department of Nuclear Engineering and Radiological Sciences
Research Assistant, Advisor: Professor Fei Gao Jan. 2019 – May 2019

- Investigating the damage mechanism and defects structure of ion irradiation in TMD materials by performing molecular dynamics simulation and *ab initio* calculation

Project: Interstitial-defect interaction in tungsten alloys
University of Michigan, Department of Materials Science and Engineering
Research Assistant, Advisor: Professor Liang Qi June 2018 – May 2019

- Investigating the interstitial-defect interaction in tungsten alloys by *ab initio* calculation
- Constructing the simulation model with Python code

Project: Reversible solid electrolyte interface layers for advanced Li-ion batteries and beyond
University of Michigan, Department of Nuclear Engineering and Radiological Sciences
Research Assistant, Advisor: Professor Fei Gao Jan. 2018 – Jan. 2019

- Seeking theoretical explanation of the reversible solid electrolyte interface (SEI) formation in lithium ion batteries with multi-scale methods from atomistic to mesoscale simulation

Thesis: First-principles study of plutonium and cerium solubility in $\text{Gd}_2\text{Sn}_2\text{O}_7$ pyrochlore

Lanzhou University, School of Nuclear Science and Technology

Research Assistant, Advisor: Professor Yuhong Li

Dec. 2016 – June 2017

- The solubility of Pu and Ce in $\text{Gd}_2\text{Sn}_2\text{O}_7$ has been investigated by DFT+U calculation
- Energy, structural and electronic properties of the solid-solution have been studied in detail
- This work has been published in Nucl. Instrum. Methods Phys. Res. Sect. B.

PUBLICATION

Y.H. Wang, Y.H. Li, C.G. Liu, X. Liu, First-principles study of plutonium and cerium solubility in $\text{Gd}_2\text{Sn}_2\text{O}_7$ pyrochlore, Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, 436 (2018) 211-216.

SKILLS

- Experienced with LAMMPS, VASP, Quantum Espresso and SRIM
- Knowledgeable with C++ and Python programming
- Knowledgeable with materials characterization using TEM

TEACHING EXPERIENCE / ACTIVITIES

Grader, NERS 421, University of Michigan-Ann Arbor

Oct.2018 – Dec. 2018

Volunteer, 2015 Lanzhou International Marathon

June 13, 2015

Director, Public Relations Department, Student Union,
School of Nuclear Science and Technology, Lanzhou University

Sept. 2014 – June 2015

Member, Public Relations Department, Student Union,
School of Nuclear Science and Technology, Lanzhou University

Oct. 2013 – June 2014

HONORS AND AWARDS

Excellent Undergraduate Thesis, Lanzhou University

June 2017

Third Prize Scholarship, Lanzhou University

Dec. 2016

Second Prize Scholarship, Lanzhou University

Dec. 2015

Excellent Student Award, Lanzhou University

Dec. 2015

Excellent Director of Student Union,

June 2015

School of Nuclear Science and Technology, Lanzhou University

Third Prize Scholarship, Lanzhou University

Dec. 2014

Excellent Member of Student Union,

June 2014

School of Nuclear Science and Technology, Lanzhou University