Steven Herzberg

United States Citizen

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Research Interests and Summary

Currently a graduate student researcher in the Mechanical Engineering Ph.D. program at the University of California, Riverside, and co-advised by Professors Suveen Mathaudhu and Lorenzo Mangolini. Research is presently focused on utilizing a new combination of production and processing techniques to create lightweight, high strength nanocomposites with metastable microstructures. Research interest involve non-equilibrium processing methods, nanocomposites, structural materials, and functional materials.

Education

University of California, Riverside **2017-2021(expected)**

Doctor of Philosophy, Mechanical Engineering (GPA: 3.76/4.0)

GAANN Fellow (2019)

University of California, Riverside **2013-2017**

Bachelor of Science, Mechanical Engineering (GPA: 3.24/4.0)

Research

Undergraduate Research at UC Riverside **(Jan. 2016-June 2017)**

- Accumulative Roll Bonding (ARB) of nickel plated IF steel to increase strength.
- Roll Bonding metallic glass sheets with alternating layers of nickel foil to enhance the plasticity of the metallic glass, increasing its effective strength.

Graduate Research at UC Riverside **(Sept. 2017-Present)**

- Utilize non-thermal plasma to synthesize amorphous, non-stoichiometric SiC nanopowders, followed by spark plasma sintering to consolidate the powders into bulk materials with metastable structures and unique properties.

Technical Skills

- XRD
- SEM
- EDS
- Metallography
- Mechanical Testing
- Machining
- Spark Plasma Sintering (SPS)
- Non-Thermal Plasma Synthesis
- Vacuum Systems
- SolidWorks
- Matlab
- Origin

Fellowships and Grants

Dean's Distinguished Fellowship **2017-2018**

Dept. of Ed., Graduate Assistance in Areas of National Need (GAANN) **2017-2019**

Professional Societies and Committees

The Minerals, Metals, and Materials Society (TMS) **2016-Present**

Mechanical Behavior of Materials Committee **2017-Present**

Institute of Electrical and Electronics Engineers (IEEE) **2016-2017**

Nanomechanical Behavior of Materials **2020-Present**