XUEQIN HUANG

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Education

Southern University of Science and Technology (SUStech), Shenzhen — September 2013-June 2017

B.S. in Physics| Major GPA 3.83/4.0 Cumulative GPA: 3.78/4.0

Texas A & M University — September 2017-Present

Ph.D. in Material Science Engineering

Research Experience

Undergraduate Research Assistant — Sept.2015-June 2017

Supervisor: Dr. Jiaqing He, Professor in Dept. of Physics, SUStech

Project title: Enhancement of thermoelectric properties on polycrystalline SnSe by composite with two-dimensional material $MoSe_2$.

- Mastered basic knowledge of the thermoelectric materials, especially in SnSe.
- Mastered basic thermoelectric materials synthesis methods, such as solid phase method and ball-milling method and testing methods using LFA, Zem-3, DSC, etc.
- Studied the thermoelectric properties of SnSe and $MoSe_2$, synthesized the target samples, tested their thermoelectric properties independently and analyzed the mechanism of the high performance of the samples.

Phd. Student — September 2017-Present

Advisor: Dr. Raymundo Arroyave, Professor in Dept. of MSEN, TAMU

Project title: Phase-field simulation of solidification morphology in laser powder deposition of Ni-based Binary Alloys

- Mastered basic knowledge of the dissipation Phase-Field model.
- Mastered coding the computation in python with GPU hardware.

Recent Research

1. Microstructure simulation on Ni-based additive manufacturing materials
2. Coupling the dissipation Phase-Field model with the Lattice Boltzmann model

Publication

1. Xue-Qin Huang, Yue-Xing Chen, Mei-Jie Yin, Dan Feng, Jia-Qing He, origin of the enhancement in transport properties on polycrystalline SnSe with compositing two-dimensional material $MoSe_2$. *Nanotechnology* 28(2017) 105708

2. Yue-Xing Chen, Zhen-Hua Ge, Mei-Jie Yin, Dan Feng, Xue-Qin Huang, Wen-Yu Zhao, Jia-Qing He, Understanding of the Extremely Low Thermal Conductivity in High Performance Polycrystalline SnSe through Potassium Doping. *Adv. Funct. Mater.* 2016, 26, 6836-6845.

Poster Presentations on International Conferences

1. Thermoelectric properties of SnSe composite with $MoSe_2$, the 35th Annual International Conference on Thermoelectrics & the 1th Asian Conference on Thermoelectrics (ICT/ATC 2016), Wuhan, China, May 29- June2, 2016 (Poster, first author)

Skills

Programming:

C++, Java, Matlab (served as a programmer in two mathematic model contests and won prizes), Python

Instrumentation:

Zem-3, DSC, XRD, SPS, LFA: Received systematic training