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JINGNING ZHANG

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EDUCATION

Department of Physics, University of Science and Technology of China **Hefei, China**
B.S. in Condensed Matter Physics, Applied Physics Aug 2014 - Jun 2019 (Expected)
Overall GPA: 3.30/4.3 (Average Score: 83.11/100) **Major GPA:** 3.69/4.3
Core Courses: Solid State Physics A(92), Thermodynamics and Statistical Physics A(88), Quantum Mechanics A(85), Electrodynamics(90), Theoretical Mechanics(90), An Introduction to Modern Atomic and Molecular Physics(86), Optics(95), Electromagnetism A(86), Thermal Physics(87), Mechanics(98), Fundamentals of Electronic Technology I(91), Computational Methods B(86), Computer Programming A(90)

RESEARCH EXPERIENCE

Research Intern, Institute for Solid State Physics (ISSP), the University of Tokyo Jul 2018-Sept 2018
Supervisor: Prof. Taisuke Ozaki
Project: Structure exploration for AB_2 type monolayers by high-throughput DFT calculations
To predict new two-dimensional materials having AB_2 composition which are possible candidates for data storage applications, I addressed computational exploration by performing high throughput calculations based on density functional theories.

- ✧ Carried out the geometry optimizations on thousands of compositions and analyzed the numerous output data
- ✧ Developed an efficient workflow and system rules to reduce the calculation workload
- ✧ Summarized the most stable structures and created a structure map for AB_2 type monolayers
- ✧ Performed the nudged elastic band (NEB) calculations to check the stability of candidate materials

Research Assistant, Department of Physics, USTC Mar 2018-Jun 2018
Supervisor: Prof. Jin Zhao
Project: Investigation of the intrinsic ferromagnetism in monolayer Chromium(III) iodide (CrI_3)

- ✧ Studied the structure and performed the geometry optimization of CrI_3 bulk crystal
- ✧ Built the single-layer CrI_3 model and implement the lattice constant optimization
- ✧ Calculated the band structures and density of states (DOS) of CrI_3 monolayer and bulk crystal using PBE functionals
- ✧ Analyzed their electronic structures properties from calculation results and diagrams

Research Team Leader, University Hospital, USTC Oct 2017-Dec 2017
Advisor: Dr. Su Qiu
Project: Using Medical Ultrasound to study the Effect of Exercise on Human Blood Flow Distribution

- ✧ Measured blood speed, blood flow and cardiac output of human beings before and after exercise using medical ultrasound machine
- ✧ Data analysis, visualization and presentation

Research Intern, Department of Physics & Astronomy, University of Pittsburgh Jul 2017-Sept 2017

Supervisor: Prof. Hrvoje Petek

Project: Program development for manipulating mirrors in MZ interferometer

- ✧ Added a new function into a software package programed in LabVIEW to precisely control the small movements of the mirrors in the MZ interferometer.
- ✧ Learned the basic of density function theories and how to use Vienna Ab-initio Simulation Package (VASP) software to investigate electronic structure of systems

SELECTED AWARDS

Outstanding Student Scholarship, Bronze Award, USTC Oct 2018

13th Competition of Physical Research Experiments, First Prize, USTC Dec 2017

Thesis Contest on Optics, Second Prize, USTC Dec 2016

Incoming Student Scholarship, Bronze Award, USTC Sep 2014

30th Chinese Physics Olympiad, First Prize (rank 16th), Fujian Province Oct 2013

WORK EXPERIENCE

Teaching Assistant of the Course *Optics* Sep 2018-Present

Teaching Assistant of the Course *College Physics Experiment I* Feb 2018-Jun 2018

Teaching Assistant of the Course *College Physics Experiment II* Sep 2017-Jan 2018

Teaching Assistant of the Course *College Physics Experiment I* Feb 2017-Jun 2017

EXTRACURRICULAR ACTIVITIES

Vice President, USTC Linux User Group May 2015-May 2016

Team Leader and Front-end developer, Web Development, *iCourse.club* Mar 2015-Jun 2015

Project Organizer, MOOC promotion for middle school students Aug 2014-Feb 2015

Intern, MOOC Department, *guokr.com* Company July 2014-Aug 2014

Translation Volunteer, Subtitle Group for *How Things Work* Course Jan 2014-Mar 2014

ADDITIONAL INFORMATION

Computer Skills:

Programming Languages: C / Python / Bash / CSS / HTML

Software: VASP, OpenMX, Material Studio, VESTA, Mathematica, Vim

Systems: Linux, Windows

Languages: Fluent English, Native Chinese

Interests: Running (Personal Best: 5km 22:38.52, Half marathon 1:46:25, Marathon 4:17:13)