

Jiawei Zhan

CONDENSED MATTER PHYSICS · APPLIED PHYSICS

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Education Background

University of Science and Technology of China (USTC)

Hefei, Anhui, P.R.China

SCHOOL OF PHYSICS

Dec. 2016 - present

MAJOR: APPLIED PHYSICS **MINOR:** COMPUTER SCIENCE AND TECHNOLOGY

- **Overall GPA:** 3.59/4.3 (Average Score:85.66/100)
- **Core Courses:** Computer Programming A(90), Equations of Mathematical Physics A(91), Atomic Physics(97), Function of Complex Variable A (85), Probability Theory and Mathematical Statistics(92), Optics(85), Theoretical Mechanics A(95), Calculus for Functions of Several Variables(95), Linear Algebra B1(90), Thermal Physics(90), Electromagnetism A(87), Calculus for Functions of a Single Variable(87)

University of California, Los Angeles (UCLA)

Los Angeles, U.S.

SCHOOL OF PHYSICS

Jun. 2018 - Aug. 2018

- **Overall GPA:** 4.0/4.0
- **Course taken:** Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity(A+), Calculus of Several Variables(200/200)
- **Selected Activities:** Visited top-class labs on campus, and assisted a classmate in guiding new students' Orientation

Selected Research Project

Summer Internship, Institute of Software, Chinese Academy of Science

Beijing, P.R.China

PROJECT: DYNAMICS INDEX UPDATE OF MOVING TAXI

Jul. 2017 - Aug. 2017

ADVISOR: PROF. LIMIN GUO

- Constructed a more hierarchical and regional program, concerning about the giant amount of data, time and energy consumption.
- Divided different data into different groups based on its process in order to decrease the amount of iteration during data traversal.
- constructed the database in a tree form, bringing order to the data from root to leaves.
- Established the foundation of Bitmap indexing technique by changing a giant amount of two-dimensional taxis' positional messages (X-Y) into one dimensional data (Number in a grid) as well as attaching a doubly linked list to each cell.
- Used Binary heap to pop out the target data with its own automatic shift, hierarchizing the data.

Research, University of Science and Technology of China (USTC)

Hefei, Anhui, P.R.China

PROJECT: PARTIALLY OXIDIZED SnS_2 ATOMIC LAYERS ACHIEVING EFFICIENT VISIBLELIGHT-DRIVEN CO_2

REDUCTION

Sep. 2018 - present

ADVISOR: PROF. JIN ZHAO

- Constructed the unitcell and supercell of all SnS_2 atomic layers, poorly oxidized and mildly oxidized SnS_2 atomic layers via VESTA and Material Studio.
- Learned the uses of Vienna ab initio simulation package(VASP) and the theorem of DFT calculation. Got the DOS and band graph of SnS_2 atomic layers via python.
- Calculated electronic energy of the SnS_2 system via VASP, proved that the existence of oxygen could decreases the reaction Gibbs free energies(ΔG) of COOH^* , which is an intermediate product of the procedure, so that this might be regarded as a significant step that could influence the whole CO_2 reduction process.
- Calculated the lattice parameters of different doped SnS_2 , giving out a convincing reference on whether the novel matter could be made in experiment.
- Analyzed the electronic structure and magnetic properties of Ni-O-doped SnS_2 , using first principles calculation.

Extracurricular Activity

Fifth Class of Physics Department, 2016

Sep. 2017 - present

VICE-MONITOR

- consolidated students' safety consciousness by holding different kinds of safty pedagogical activities.
- Won the final award of Excellent Classes of the Year in both 2017 and 2018 by doing annual class report
- Created a new system to record attendance, dramatically decrease the time consumption.

Soccer Team of Physics Department

Sep. 2016 - present

OUTSIDE LEFT

- Got the 4th prize in the Champion Cup.

Professional Skills

Programming Python, C/C++, Matlab, Mathematica, LaTeX
Software: VASP, VESTA, Scidavis, Mathematica, Matlab, Vim, Material Studio
Languages Fluent English, Native Chinese
Standard English Test: TOFEL: 90(Reading 26, Listening 22, Speaking 19, Writing 23)
Hobby Soccer (One member of school team), Piano (Amateur Level 10)

Selected Honors & Awards

2018	Grand Prize , The 14th University Physics Research Experimental Paper Competition, USTC	<i>Hefei, Anhui, China</i>
2018	Bronze Award , Outstanding Student Scholarship, USTC	<i>Hefei, Anhui, China</i>
2017	4th Prize , Champion Cup(Soccer Competition for College Teams)	<i>Hefei, Anhui, China</i>
2016	2nd Award , 30th Chinese Mathematical Olympiad	<i>Sichuan, China</i>