Name: **Shuyue Zhang**

Nationality: Chinese
Gender: Male
Date of Birth: Feb 1999

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Education & Working

Bachelor of Science in Chemistry, Shandong University — Sep 2017 – Jun 2021
Research Assistant, School of Chem. and Chem. Eng., Shandong University — Jun 2021 – now

Scores & Honors

Outstanding Undergraduate Thesis of Shandong University, 2021 — 2%
Percentage Score: 82.52 / 100 — **GPA**: 4.14 / 5.0
TOEFL Score: 83 (Test Date: 03/2024)

Major Courses

- Inorganic Chemistry, Chemical and Instrument Analysis
- Basics of Chemical Engineering
- Physical Chemistry, Electrochemistry, Surfactant Chemistry
- Structural Chemistry, Computational Chemistry, Molecular Simulation Experiment
- Organic Chemistry, Chemistry of Drug Synthesis, Asymmetric Synthesis
- Macromolecule Chemistry and Physics, Polymeric Materials Science, Organosilicon Chemistry

Laboratory experience

Experience

- Basis Chemistry Experiment
- Instrument Analysis Experiment
- Basics of Chemical Engineering Experiment
- Comprehensive Chemistry Experiment
- Successfully completed the 2019-2020 Open Innovation Experiment under the guidance of Professor Yanzhao Yang. The research focused on extraction of gold using functionalized molecular self-assembly systems in an acidic medium. I contributed to the synthesis of magnetic nanoparticles in a high-pressure reactor, gaining valuable hands-on experience. Additionally, I gained exposure to advanced characterization techniques especially the transmission electron microscopy (TEM).
- Executed the Graduation Thesis in 2021, guided by Professor Qingzeng Zhu in the field of organosilicon. The thesis titled *Exploring the Dielectric Properties of Polysiloxane*, involved measuring capacitance to calculate the dielectric constants of diverse polysiloxane variants and the exploration delved into explaining variations in dielectric constants, considering factors such as polarity and temperature through the Clausius-Mossotti-Debye equation and the dipole moment obtained by-molecular simulation. This thesis was awarded the Outstanding Undergraduate Thesis of Shan dong University for the undergraduates in 2021.

- Since graduating in 2021, I have been working as a research assistant in Professor Qingzeng Zhu's research group. In this role, my responsibilities include assisting with various aspects of the research process, such as the synthesis of high-strength silicone rubber and the characterization of it, particularly examining flow and deformation using a rheometer. Additionally, I contribute to tasks such as determining molecular weight distribution. Furthermore, I also play a key role in the supervision of laboratory safety.

Skills

- Analyze vibrational (IR and Raman) and electronic (UV-vis) spectra, as well as ^{1}H NMR.
- Utilize a rheometer to analyze and characterize the flow and deformation properties of materials.
- Determine number-average molecular weight using Gel Permeation Chromatography (GPC).
- Utilize the software *Malvern Zetasizer* to analyze Dynamic Light Scattering (DLS) data and obtain size distribution in a solution.
- Perform a Powder X-ray Diffraction (PXRD) experiment and utilize the software *Jade* for data analysis.
- Proficient in generating charts using the software *Origin*.
- Conduct simple simulations and calculations using the software *Material Studio*.

EXTRAS

Over the years since graduation, I have been working as a research assistant while striving to identify and pursue my personal interests and lifelong career aspirations. Finally, I have discovered a lifelong pursuit in the realm of scientific research. I eagerly anticipate returning to campus as a student, relishing the opportunity to engage in collaborative discussions with peers and collectively address scientific inquiries.

Strengths

- Acknowledged for exceptional lab skills by professors (average scores above 90).
- Demonstrate a strong sense of curiosity and diligence in acquiring new knowledge and skills.

Self-Taught Courses

- C Programming Language, Python Programming Language, basic Linux Bash script.
- Data Structures and Algorithms, Operating Systems, Computer Organization and Architecture, Computer Networks.
- Basic function of LaTeX(A typesetting system)

Interests

- Programming
- Physics (Since high school, I have a strong passion for physics. However, I have lacked the courage and opportunity to pursue a systematic study of it)
- Reading (history, non-fiction, psychology, etc.)