

Yefei Zhang

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EDUCATION

Colorado State University, Fort Collins, Colorado, USA

- Major in General Mathematics and Chemistry (GPA: 4.00/4.00) Jan 2020 – May 2021
 - Relevant Coursework: PDEs, ODEs, Advanced Calculus, Linear Algebra, Abstract Algebra, Complex Analysis

East China Normal University, Shanghai, CN

- Major in Chemistry and Elite Program (GPA:3.32/4.00) Sep 2017 – Jul 2019
 - Relevant Coursework: Probability and Statistics, Inorganic Chemistry, Matter Structure, Physical Chemistry

Belmont University, Nashville, Tennessee, USA

- Exchange Student (GPA: 3.90/4.00) Aug 2019 – Dec 2019
 - Relevant Coursework: Advanced Physics, Discrete Mathematics, Biochemistry

RESEARCH INTEREST

Nonlinear Dynamics, Complex System, Multiscale Modeling, Scientific Computing

RESEARCH EXPERIENCE

- Independent Studies in PDEs and Multiscale Modeling** Jan 2020 – Present
 - Learning the first four chapters of the book Partial Differential Equations authored by L.C. Evans and trying to complete the exercises in these chapters.
 - Reading the book Principles of Multiscale Modeling by Weinan E and Nonlinear Dynamics And Chaos by Steven Strogatz. Trying to get the basic method of studying complex systems.
- Synthesis and Characterization of Several Terbium(III)-Based Molecules** Aug 2019 – Dec 2019
Research Student, Department of Chemistry and Physics, Belmont University Advisor: [Dr. Justin Stace](#)
 - Studied the chemical sensing properties and Synthesized some terbium-bisphenathroline complex molecules.
 - Used UV-VIS and NMR to characterize the luminescent molecules and explored their electromagnetic properties.
- Solar-Based Photocatalytic Decomposition of Water into Hydrogen** Jul 2019 – Aug 2019
Summer School Student, Dalian Institute of Chemical Physics, CAS Advisor: [Dr. Fuxiang Zhang](#)
 - Read and organized some recent papers about Photocatalytic Water Splitting.
 - Learned how to design the photocatalyst and how to use the analytical instruments (XRD, SEM, TEM).
- Synthesis and Characterization Fluorescent Probes Based on Coumarin** Jan 2018 – Jun 2019
Research Student, Department of Chemistry, ECNU Advisor: [Dr. Xiaoyan Cui](#)
 - Studied the properties of Fluorescent Probes and synthesized the silicon-based coumarin fluorescent molecule using m-bromoaniline as the precursor.
 - Calculated the hydrogen bond energy of silicon-based coumarin using M06-2X and Def2TZVP theoretical model in Gaussian software, and explained the reason for spectral changes in different polar solvents.

TEACHING EXPERIENCE

East China normal university tutor center, Shanghai, CN

- Teaching Assistant in Calculus. Feb 2018 – Jul 2018

Xiacun Primary School, Linyi, Shandong Province, CN

- Teaching Volunteer in Basic Chemistry and Physics Experiments. Jan 2018 – Feb 2018

AWARDS & SCHOLARSHIPS

- Dean's List, Colorado State University 2020
- Global Partnership Award, Colorado State University 2020
- Dean's List, Belmont University Fall 2019
- Exchange Partner Tuition Waiver, Belmont University Fall 2019
- The Elite Program Scholarship, East China Normal University 2017 & 2018 & 2019
- School-level Scholarship, East China Normal University (Top 10%) 2018
- Honorable Mention of Physics Contest, East China Normal University (Top 15%) 2018
- Outstanding Volunteer, East China Normal University 2018

SKILLS

- Programming Language:** MATLAB, Python, C/C++, Java
- Software and Framework:** \LaTeX , Mathematica, IGOR Pro
- Instrumentation:** NMR, UV-Vis Spectroscopy, Infrared (IR) Spectroscopy, Fluorimetry
- Language:** Chinese (Native), English (Fluent)