

XUAN LIU

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🎓 EDUCATION

University of Illinois at Chicago, Chicago, Illinois, U.S. Aug. 2019 – Present
3+2 Program, Master of Science in Chemical Engineering, expected May 2021
GPA: 3.75/4

University of California, Davis: Davis, California, U.S. Feb. 4–22, 2019
GREAT Winter Intensive Short Course

Xi'an Jiaotong University: Xi'an, Shaanxi, China Aug. 2016 – Jul. 2019
Bachelor of Engineering in Chemical Engineering, expected June 2020
Average Score: 85.36/100

Core Courses(Grades): Organic Chemistry(91/100); Analysis of Modern Instruments(91/100); Unit Operation2(91/100); Chemical Engineering Thermodynamics(92/100); Chemical Process Design(91/100);

- Advanced Individual of Social Work (Top 3%) Sep. 2019
- The Third Prize Scholarship Sep. 2019
- Excellent Student Sep. 2018
- The Second Prize Scholarship (Top 5%) Sep. 2018
- The Third Prize Scholarship Sep. 2017

📖 PUBLICATION AND CONFERENCE PRESENTATION

Selective Hydrogenation of Aromatic Ketone over Pt@Y Zeolite Through Restricted Adsorption Conformation of Reactants by Zeolitic Micropores Feb. 2020
Qiang Chen, Haozhe Kang, **Xuan Liu**, et al. ChemCatChem. (DOI: 10.1002/cctc.201902302)

Thiophene-Ethynylene-Based Viologen Derivatives: A Novel Platform of Photosensitizer for Photodynamic Antimicrobial Chemotherapy (Poster Presentation) Nov. 2019
Xuan Liu, Mengying Guo and Kun Zhou, 2019 Annual AIChE Student Conference (Abstract ID: 587714)

🔬 RESEARCH EXPERIENCE

Zwitterionic Polymer for Controlling Biofouling Aug. 2019 – Present
Department of Chemical Engineering, UIC Advisor: Prof. Gang Cheng

- Design and synthesize degradable zwitterionic Polymer
- Study the property of antifouling by making the polymer to a hydrogel

Development and Application of Lithium Sulfide /Cathode Material Sep. 2018 – Aug. 2019
School of Chemical Engineering and Technology, XJTU Advisor: Prof. Long Qu

- Designed and synthesized sulfur cathode of FeSe_x used for lithium-sulfur batteries
- Assembled cells for testing

Viologen Derivatives for Photodynamic Therapy Jul. 2018 – Jul. 2019
Frontier Institute of Science and Technology, XJTU Advisor: Prof. Gang He

- Designed and synthesized a new Thiophene-Ethynylene-Based Viologen Derivatives
- Studied the photodynamic therapeutic properties of photosensitizer by in vitro experiments of gram-positive bacteria (*S. aureus*) and gram-negative bacteria (*E. coli*)

Selective Hydrogenation over Pt@Y Zeolite

May. 2018 – Dec. 2018

School of Chemical Engineering and Technology, XJTU Advisor: Prof. Qiang Chen

- Designed and synthesized Pt@Y zeolite
- Characterized morphology and topography of zeolite
- Designed experiments to verify the selective hydrogenation performance of the material

Optimization of Ethyl Tert-butyl Ether Production Process

Oct. 2017 – Apr. 2018

School of Chemical Engineering and Technology, XJTU Advisor: Prof. Gui-Lian Liu

- Simulated and optimized ETBE reactive distillation processes by using Aspen Plus
- Passed the examination of Scholastic Undergraduate Innovation Project

★ EXTRACURRICULAR HONORS AND AWARDS

Sixth & Outstanding Teamwork Award , China Chem-E-Car Competition	May. 2019
Honorable Mention , XJTU Extracurricular Academic Science and Technology Competition	Apr. 2019
Honorable Mention , COMAP Interdisciplinary Contest In Modeling (ICM)	Apr. 2018
Third Prize , Asia and Pacific Mathematical Contest in Modeling (APMCM)	Jan. 2018
First Prize , National Mathematical Modeling Contest (Shaanxi Division)	Nov. 2017
Top 1% , XJTU Excellent Student Volunteer in Admissions Publicity	Sep. 2017
Second Prize , Scholastic Mathematical Modeling Contest	May. 2017

👥 LEADERSHIP EXPERIENCE

AIChE Xi'an Jiaotong University Student Chapter

Aug. 2019 – Present

Initiator and Chairman of the Provisional Committee

Volunteer Association of Admission Publicity

Sep. 2016 – Jun. 2019

Successively served as Minister and Chairman

- Organized and planned the "Campus Ambassador Social Practice Activity" in 2017 and 2018, respectively, which has more than 3,000 students signed up and participated
- Assisted the staffs of Admission Office to organize hundreds of admission activities
- Participated in various kinds of volunteer activities and served over 350 hours

🔧 SKILLS

• **Laboratory Skills:**

- Competent in organic synthesis (macromolecules and small molecules), synthesis of zeolite, electrode preparation methodologies, design of synthetic route by SciFinder, and characterization of compounds
- Proficient with laboratory equipment including GC-MS, GPC, NMR, XRD
- Proficient in techniques of chromatography column, Schlenk line
- Practiced in laboratory safety protocols including material safety data sheets (MSDSs)

• **Computer Simulation:** Materials Studio, ANSYS, Aspen, GAMS

• **Data Analysis:** Origin, MATLAB, SPSS

• **Mooc:** Medicinal Chemistry: The Molecular Basis of Drug Discovery (Certificated); Introduction to Solid State Chemistry (Certificated); Writing in the Sciences (Certificated)

• **Design:** Adobe Photoshop, Adobe Illustrator, Adobe Premiere Pro, Adobe After Effects, HTML/CSS/JS

• **Languages:** English - Fluent, Mandarin - Native speaker