

# Tianbo Tse

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## Education

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### University of Kentucky

Exchange Student/Graduate Student

2018-2020/2022-2024

### Beijing University of Technology

Bachelor of Engineering in Environmental Engineering

2021

## Research Experience

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### University of Kentucky

Advisor: Dr. Rachel Schendel

Department of Animal & Food Sciences

Recycling of Bourbon Spent Grains

Aug. 2022–Now

### Peking University

Advisor: Dr. Zhi-Xiang Yu

College of Chemistry and Molecular Engineering

Mechanistic Research on Specific Reactions

Oct. 2021–Mar. 2022

- Mechanism of an ODI [5+2] reaction and a specific Lu [3+2] reaction
- Participated in two graduate-level courses: Theoretical Organic Chemistry & Quantum Chemistry

### Chinese Academy of Agricultural Sciences

Advisor: Dr. Yuquan Xu

Biotechnology Research Institute

Combinatorial Biosynthesis of Indole diterpene

Apr. 2021–Oct. 2021

- Construction of plasmids for microbial engineering
- Natural product separation and identification

### Beijing University of Technology

Advisor: Dr. Zhirong Sun

Faculty of Environment and Life

Diuron Catalytic Degradation

Dec. 2020–Jun. 2021

- Predicted degradation pathways and major intermediate products with GC-MS and kinetics
- Estimated the practical potential of the catalyst on diuron removal from wastewater

## Graduate-Level Coursework Highlight

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- **Chemistry:** Synthetic Organic/Reaction Mechanism/Crystallography/Inorganic/Biochem
- **Physics:** Stat Mech/GR/QM/E&M/Mechanics/Math Methods/Comp Phys/Astrophys

## Qualifications

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- Distilling, Wine and Brewing Program Certificate ([University of Kentucky](#), 2020)
- Clair L. Hicks Food Science Scholarship ([Community Foundation of Louisville](#), 2023)

## Meetings

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- **The 10th Beijing Kein Molecular Dynamics and GROMACS Workshop**, Beijing Kein Research Center for Natural Sciences, Beijing, China, December 11th-14th, 2021
- **The 16th Beijing Kein Quantum Chemistry Workshop**, Beijing Kein Research Center for Natural Sciences, Beijing, China, October 3rd-7th, 2021
- **The 4th Annual James B. Beam Institute Industry Conference**, [University of Kentucky](#), Lexington, KY, USA, March 13th-15th, 2023

## Wet & Dry Lab Skills

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- HPLC/NMR/PCR/Gaussian/ORCA/xTB/MOPAC/GROMACS/Multiwfn