1) Personal Information

Name: Lehui Chen
Gender: Male
Ethnicity: Han
Date of Birth: Jan. 13, 2005
Political Status: Communist Youth League Member
Contact: 13927055769
Email: lehui_chen_gdut@163.com
Homepage: https://lehuichen.github.io

2) Education Background

Guangdong University of Technology: School of Light Industry and Chemical Engineering | Chemical Engineering and Technology Excellence Engineer Class (Sep. 2022 – Present)
GPA: 3.272/5.0 | Ranking: 63/155
CET-4: 427
Core Courses: Advanced Mathematics (96), Physical Chemistry (85), Analytical Chemistry Lab (91), Physical Chemistry Lab (89), Chemical Engineering Principles Course Design (91)
Honors: National Encouragement Scholarship, University Academic Excellence Third Prize (twice), Outstanding Individual in Guangdong University of Technology Academic Science and Technology Festival

3) Research Experience

- Synthesis and Application of Adhesion Promoters for Addition-Cure Liquid Silicone Rubber and Anti-Yellowing Platinum Catalysts

Mar. 2023 – May 2025
(University-Enterprise Project: Joint Training Program with Guangzhou Tianjiang Advanced Materials Co., Ltd.)

1. Addressed poor adhesion of non-polar silicone rubber to substrates (e.g., PC, PA) by designing novel silicone adhesion promoters with polar groups (epoxy, acrylate), enhancing interfacial bonding and economic viability.
2. Modified Karstedt-type platinum catalysts using phenyltrimethoxysilane (PTMS) as a ligand to prevent deactivation, resolving catalyst poisoning and improving storage stability.

- DFT-Based Study on Reactive Oxygen Species Transformation During Alkaline TiO_2 Photocatalytic Oxidation of As(III)

Dec. 2023 – Jan. 2025
(Guangdong University Student Innovation Training Program | Role: Second Member)

1. Resolved controversies in TiO_2 photocatalytic oxidation (PCO) mechanisms using density functional theory (DFT) to model transient reactive oxygen species (ROS) generation and conversion.
2. Validated computational results with experimental data, proposing reaction pathways for As(III) oxidation in alkaline environments to guide high-efficiency TiO_2 catalyst design.

- Nanocellulose/MWCNT-Reinforced Polyacrylamide/Sodium Alginate Conductive Hydrogel for Flexible Sensors

Sep. 2022 – Oct. 2023
(Guangdong Provincial University Innovation Team Project | Role: Core Member)

1. Co-developed a dual-reinforced conductive hydrogel using nanocellulose and multi-walled

carbon nanotubes (MWCNTs), achieving high mechanical strength, conductivity, humidity stability, and bidirectional shape-memory response.

2. Publication: **Journal of Colloid and Interface Science (IF=9.4, CAS Journal Ranking—Top), Fourth Author.**

4) Competitions & Awards

1. **China International College Students Innovation Competition (2024)**
   Gold Award (University's Sole Winner) | Team Leader | Oct. 2024
2. **China International College Students Innovation Competition Guangdong Division (2024)**
   Silver Medal & Gold Award (University's Sole Winner) | Team Leader | Aug. 2024
3. **National Mathematical Modeling Contest—Guangdong Division**
   Third Prize | Team Member | Dec. 2024
4. **National College Mathematics Competition**
   Third Prize | Individual | Dec. 2024
5. **Win in Guangzhou & Greater Bay Area Entrepreneurship Competition**
   First Prize (Top Score) | Second Member | Apr. 2025
6. **Blue Bridge Cup Programming Competition—Guangdong Division (Python Group)**
   Second Prize | Individual | Apr. 2024

5) Skills

Software: ChemDraw, Python, C++, Jupyter Notebook, TensorFlow/PyTorch, Gaussian, MATLAB, Origin, EndNote, SPSS, LaTeX, MS Office

Instruments: IR/UV Spectroscopy, SEM, GC, Rheometer, XRD, TEM