

Jianping Wang

Curriculum Vitae



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EDUCATION

2024 – NOW **Ph.D. Candidate**
PHYSICAL CHEMISTRY
College of Chemistry and Molecular Engineering
Peking University

Supervisor: Prof. Jin Zhang

2020 – 2024 **Bachelor of Science (Honory)**
CHEMICAL PHYSICS
Department of Chemical Physics
University of Science and Technology of China

Overall GPA: 3.8/4.3

Ranking: 9/135

Graduate Thesis: High-throughput optical characterization of single-walled carbon nanotube horizontal arrays

PUBLICATIONS

1. A LaCl_3 -based lithium superionic conductor compatible with Li metal. *Nature* **616**, 77–83 (2023).
2. Low cost and low density chloride solid electrolyte for all solid state cathode with high active material ratio. *Nano Research* **17**, 8826-8833 (2024).
3. Calibrated absolute optical contrast for high-throughput characterization of horizontally aligned carbon nanotube arrays. *Nano Today* **59**, 102502 (2024).

RESEARCH INTERESTS

Currently, my work concentrates on the structural controlled synthesis of carbon nano-materials, especially the diameter-controlled growth of single-walled carbon nanotubes (CNTs), which is believed to be the next-generation material for integrated circuit. Also, I'm doing some research on AI for Chemistry, which may help us better understand the mechanism of CNT growth.

Here is some of my undergoing works:

• Diameter-controlled growth of CNTs

In this work, we develop a strategy to limit the size distribution of catalysts on our Al_2O_3 substrate, thus to limit the diameter of CNTs, which is achieved by the VLS mechanism of CNT growth.

• Heat transfer effect in CNT growth

In this work, we utilize the physics-driven AI model to discover the key parameters in CNT growth, and we have discovered the heat transfer is of great importance, which was ignored by researchers so far.

SELECTED AWARDS

- 2024 **Outstanding Graduate**
University of Science and Technology of China
- 2024 **Yang Chengzong Scholarship**
School of Chemistry and Material Science, USTC
- 2024 **Ji Wenbo Scholarship for Outstanding Research**
School of Chemistry and Material Science, USTC
- 2023 **2nd-Class Prize of 'Questions and Conjectures'**
Department of Higher Education, Ministry of Education
- 2023 **Lu Jiaxi Scholarship**
Fujian Institute of Research on the Structure of Matter
- 2023 **Award of Excellent Academic Report**
Nankai University
- 2023 **Outstanding National Innovation Training Program**
University of Science and Technology of China
- 2022 **Huang Minglong Scholarship**
Shanghai Institute of Organic Chemistry
- 2021 **Scholarship for Excellent Student**
Guangzhou Institute of Energy Conversion
- 2021 **Scholarship of Lu jiaxi Talant Program**
University of Science and Technology of China
- 2021 **3rd-Class Prize in Electromagnetism Competition**
Office of Academic Affairs, USTC
- 2020 **Scholarship for Outstanding Freshmen**
University of Science and Technology of China

PART-TIME JOBS

- 2024 – NOW **Website Manager**
- 2022 – 2023 **Teaching Assistant @ USTC**
- 2022 – 2023 **26th Student Congress Representative**
- 2021 – 2024 **Member of the USTC Media Center**

LINKS

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