


# NINGKANG ZHAO

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## Education

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### Master of Energy and Power Engineering

Shanghai Jiao Tong University

2022.09 - 2025.03

### Bachelor of Electrical Engineering and Automation

Changsha University of Science & Technology

2017.09 - 2021.06

## Publication

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- [1] W. Xu, N. Zhao, M. Song, and X. Liu, Surface Modification of Zirconium Alloy with Nanocrystalline Diamond: Enhancing Quenching Performance for Accident Tolerant Fuel. *Small* 21, no. 40 (2025): e03963. [DOI:10.1002/sml.202503963](https://doi.org/10.1002/sml.202503963)
- [2] N. Zhao, M. Song, X. Zhang, W. Xu and X. Liu, Nanodiamond Coating in Energy and Engineering Fields: Synthesis Methods, Characteristics, and Applications. *Small* 2024, 20, 2401292. [DOI:10.1002/sml.202401292](https://doi.org/10.1002/sml.202401292)
- [3] W. Xu, L. Tang, N. Zhao, K. Ouyang, H. He and X. Liu, Corrosive Effect on Saturated Pool Boiling Heat Transfer Characteristics of Metallic Surfaces with Hierarchical Micro/Nano Structures. *Heliyon* 2024, 10 (8). [DOI:10.1016/j.heliyon.2024.e29750](https://doi.org/10.1016/j.heliyon.2024.e29750)

## Research Experience

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### Master thesis

Accident Tolerant Mechanism of Zirconium Alloy Fuel Cladding Based On Nanodiamond Coating

### Artificial intelligence competition

Intelligent identification and conversion of nuclear power plant system flow charts

### Mathematical modeling

Intelligent Clinical Diagnosis and Treatment Modeling of Hemorrhagic Stroke

### Undergraduate thesis

Research on Security Situation Awareness of the Main Grid

## Awards & Honors

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- **Second-class Corporate Scholarship**, Shanghai Jiao Tong University, China.
- **Silver Medal** in the 2024 Joint Summer School, Kyushu University, Japan.
- **Second Prize** in Mathematical Modeling Competition, Shanghai Jiao Tong University, China.

## Skills

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- **Programming Skills:** Python, MATLAB, C.
- **Communication Language:** English, Chinese.