

## Zihao Wang

Ph.D. Candidate in Key Laboratory of Crop Physiology and Ecology  
in Southern China, Nanjing Agricultural University, Nanjing, China



### Education

09/2023-06/2027: Ph.D. student, Nanjing Agricultural University, Agronomy

09/2021-06/2023: master's student, Nanjing Agricultural University, Agronomy

09/2017-06/2021: Undergraduate, Nanjing Agricultural University, Agronomy

### Research

My current research focuses on estimating photosynthetic nitrogen allocation in rice leaves based on solar-induced chlorophyll fluorescence (SIF). Since leaf photosynthetic nitrogen content is closely related to the maximum electron transport rate ( $J_{max}$ ) and the maximum carboxylation rate ( $V_{cmax}$ ), SIF can accurately estimate photosynthetic nitrogen allocation in rice leaves. Increased atmospheric  $CO_2$  concentration affects nitrogen allocation in rice leaves, primarily due to photosynthetic acclimatization mechanisms induced by  $CO_2$  enrichment. This adaptation mechanism alters the distribution ratio of nitrogen among photosynthetic components (such as the carboxylation system, electron transport system, and light-harvesting system), ultimately affecting photosynthetic efficiency and nitrogen use dynamics under environmental changes.

### Publications

1. Ding H, **Wang Z**, Zhang Y, et al. A Mechanistic Model for Estimating Rice Photosynthetic Capacity and Stomatal Conductance from Sun-Induced Chlorophyll Fluorescence[J]. Plant Phenomics, 2023.
2. **Wang Z**, Peñuelas J, Tagesson T, et al. Evolution of Global Terrestrial Gross Primary Productivity Trend[J]. Ecosyst Health Sustain, 2024.
3. **Wang Z**, Zhang Y, Wang X, et al. Reduction of uncertainties in rice yield response to elevated  $CO_2$  by experiment-model integration: A case study in East China[J]. The Crop Journal, 2024.
4. Zhang H, **Wang Z**, Yan Y, et al. Response of rice production to rising  $CO_2$  and its adaptive cultivation strategies[J]. Fundamental Research, 2024.

### Awarded

First class scholarship

Oct. 2024 & 2023

Outstanding Master's Graduates

Jun. Oct. 2023

### Languages and Skills

English-CET 6

MATLAB, Python, R, Office (Excel, Word, PowerPoint)