



**Ming Su (Dr., Prof.)**  
Research Center for  
Eco-Environmental Sciences  
Chinese Academy of Sciences

## Key Words

- ▶ 2-Methylisoborneol
- ▶ Drinking water
- ▶ Harmful algae
- ▶ *In-situ* control
- ▶ Reservoir and Lake
- ▶ Taste & odor
- ▶ Prediction model
- ▶ Ecological niche
- ▶ Biosynthesis
- ▶ Photosynthesis
- ▶ Nature based solution

## Contact

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## Research Area

Water Quality Risk Identification and Control, primarily involving interdisciplinary studies in environmental engineering, limnology, ecology, and molecular biology, with a key emphasis on the identification and control of algal-derived water quality risks in drinking water sources.

## Summary

Ming Su is currently employed as a Professor at the Research Center for Eco-Environmental Science, Chinese Academy of Sciences (RCEES, CAS), Beijing. He obtained Ph.D. from University of Chinese Academy of Sciences in 2013, then conducted postdoctoral research and has been working at RCEES, CAS ever since. Currently serves as Deputy Director of CAS Key Laboratory of Drinking Water Science and Technology. He specializes in water quality risk identification and control, achieving significant research outcomes in mechanistic analysis, technological development, and large-scale engineering applications for algal-related water quality identification and control in drinking water sources. Developed an *in-situ* algae-inhibition and odor-control technology based on ecological niche characteristics of odor-producing algae to address widespread odor issues in China's water sources. This technology has been systematically implemented in Shanghai's Qingcaosha Reservoir and extended to 18 source water reservoirs in Guangdong, Zhejiang and other regions, effectively ensuring water quality safety.

- Led over 20 projects including NSFC, key R&D programs and industrial applications
- Published 40+ papers in journals like Water Research
- Holds 6 patents/software copyrights (2 commercialized)
- Compiled "Technical Guidelines for Drinking Water Odor Control and Management"
- Honored with four prestigious awards including the CAS Outstanding Achievement Award (Team, 2021) and the China Urban Water Association Science & Technology Grand Prize (2022).

## Working Experience

### Professor

02/2025 - Present

Research Center for Eco-Environmental Sciences  
Chinese Academy of Sciences

Risk identification, pre-warning and nature-based control strategy of Algal-derived water quality problems in source water

### Assistant/Associate Professor

05/2015 - 01/2025

Research Center for Eco-Environmental Sciences  
Chinese Academy of Sciences

Developed in-situ odor-producing algal odor control technology addressing China's drinking water challenges, integrating theoretical frameworks with practical hardware-software solutions.

### Postdoctor

07/2013 - 04/2015

Research Center for Eco-Environmental Sciences  
Chinese Academy of Sciences

Study of odor-producing cyanobacteria in Miyun Reservoir, regarding the ecological niche identification, regulation and control strategy.

## Recruitment

- ▶ Environmental Engineering
- ▶ Environmental Science
- ▶ Ecology
- ▶ Molecular Biology
- ▶ Environmental Statistics
- ▶ Limnology

## Education

09/2007 - 07/2013

**Ph.D.: Environmental Engineering**

University of Chinese Academy of Sciences

Algal growth dynamics in drinking water reservoir and the driving force

09/2003 - 07/2007

**B.S.: Environmental Science**

Wuhan University

## Tools/Skills

- ▶ R
- ▶ Excel
- ▶ Quarto
- ▶ RStudio
- ▶ neovim
- ▶ Git
- ▶ Terminal
- ▶ MacOS/GNU Linux

## Welcome

We are seeking highly motivated graduate students to join our research team, with applications are invited for Ph.D. / Master's positions in the field mentioned in **Recruitment**.

## Selected Publications

See my [profile](#) for a comprehensive list of publications.

1. Tengxin Cao, **Ming Su**<sup>\*</sup>, Yufan Ai, Ziyi Yang, Jinbo Zhao, Min Yang, Green Light Suppresses Cell Growth but Enhances Photosynthetic Rate and MIB Biosynthesis in PE-Containing *Pseudanabaena*, **Water Research** (2025) 123336. [DOI](#) 10.1016/j.watres.2025.123336
2. **Ming Su**<sup>#</sup>, Weiwei Li<sup>#</sup>, Jiao Fang, Tengxin Cao, Yufan Ai, Changwei Lü<sup>\*</sup>, Jinbo Zhao, Ziyi Yang, Min Yang<sup>\*</sup>, Effects of Oxygenation Resuspension on DOM Composition and Its Role in Reducing Dissolved Manganese in Drinking Water Reservoirs, **Environmental Science & Technology** (2025) 10498–10509. [DOI](#) 10.1021/acs.est.5c00235
3. Jiao Fang, Yande Li, **Ming Su**<sup>\*</sup>, Tengxin Cao, Xufeng Sun, Yufan Ai, Jinyi Qin, Jianwei Yu, Min Yang<sup>\*</sup>, Mitigating harmful cyanobacterial blooms in drinking water reservoirs through *in-situ* sediment resuspension, **Water Research** (2024) 122509. [DOI](#) 10.1016/j.watres.2024.122509
4. Tengxin Cao, Jiao Fang, Zeyu Jia, Yiping Zhu, **Ming Su**<sup>\*</sup>, Qi Zhang, Yichao Song, Jianwei Yu, Min Yang<sup>\*</sup>, Early warning of MIB episode based on gene abundance and expression in drinking water reservoirs, **Water Research** (2023) 119667. [DOI](#) <https://doi.org/10.1016/j.watres.2023.119667>
5. Jinping Lu<sup>#</sup>, **Ming Su**<sup>#\*</sup>, Yuliang Su, Jiao Fang, Michael Burch, Tengxin Cao, Bin Wu, Jianwei Yu, Min Yang<sup>\*</sup>, MIB-derived odor management based upon hydraulic regulation in small drinking water reservoirs: principle and application, **Water Research** (2023) 120485. [DOI](#) 10.1016/j.watres.2023.120485
6. Jinping Lu, **Ming Su**<sup>\*</sup>, Yuliang Su, Bin Wu, Tengxin Cao, Jiao Fang, Jianwei Yu, Honggang Zhang, Min Yang, Driving forces for the growth of MIB-producing *Planktothricoides raciborskii* in a low-latitude reservoir, **Water Research** (2022) 118670. [DOI](#) 10.1016/j.watres.2022.118670
7. **Ming Su**, Yiping Zhu, Tom Andersen, Xianyun Wang, Zhiyong Yu, Jinping Lu, Yichao Song, Tengxin Cao, Jianwei Yu, Yu Zhang, Min Yang<sup>\*</sup>, Light-dominated selection shaping filamentous cyanobacterial assemblages drives odor problem in a drinking water reservoir, **npj Clean Water** (2022) 37. [DOI](#) 10.1038/s41545-022-00181-2
8. **Ming Su**, Yiping Zhu, Zeyu Jia, Tingting Liu, Jianwei Yu, Michael Burch, Min Yang<sup>\*</sup>, Identification of {MIB} producers and odor risk assessment using routine data: A case study of an estuary drinking water reservoir, **Water Research** (2021) 116848. [DOI](#) 10.1016/j.watres.2021.116848
9. **Ming Su**, Jianwei Yu<sup>\*</sup>, Junzhi Zhang, Hui Chen, Wei An, Rolf D. Vogt, Tom Andersen, Dongmin Jia, Jingshi Wang, Min Yang<sup>\*</sup>, MIB-producing Cyanobacteria (*Planktothrix* sp.) in A Drinking Water Reservoir: Distribution and Odor Producing Potential, **Water Research** (2015) 444–453. [DOI](#) 10.1016/j.watres.2014.09.038
10. **Ming Su**, Virginie Gaget, Steven Giglio, Michael Burch, Wei An, Min Yang<sup>\*</sup>, Establishment of Quantitative PCR Methods for the Quantification of Geosmin-producing Potential and *Anabaena* sp. in Freshwater Systems, **Water Research** (2013) 3444–3454. [DOI](#) 10.1016/j.watres.2013.03.043

## Selected Projects

National Key R&D Program, Principal Investigator

Joint water security technology for terminal section of central trunk canal water source and water treatment plants

07/2024-05/2027



Updated on 2025-08-13.

### NSFC International Cooperation Project, Key Member

Driver mechanisms and early warning of cyanobacteria-induced water quality degradation in typical bays of Lake Victoria, East Africa

01/2025-12/2027

### NSFC Key Project, Key Member

Ecological characteristics of algae and in-situ control principles of odor-producing algae in reservoir-type water sources

01/2021-12/2025

### National Key R&D Program, Key Member

Identification of pollutants and in-situ control technology for odor-producing algae in water sources

01/2022-10/2026

### MOST Key R&D Project, Key Member

Identification of pollutants and in-situ control technology for odor-producing algae in water sources

01/2019-12/2022

### NSFC General Project, Principal Investigator

Light response mechanism of filamentous odor-producing cyanobacteria and in-situ control strategies in source water reservoirs

01/2019-12/2022

### NSFC Youth Project, Principal Investigator

Impact of South-to-North Water Diversion on the growth of odor-producing algae in Miyun Reservoir

01/2015-12/2018

### Beijing Water Authority, Principal Investigator

Water supply system response strategy for attached algae problems in South-to-North Water Diversion sources

04/2023-04/2024

## Awards

### China Water Supply and Drainage Association Science and Technology Award, Grand Prize

Integration and Application of Technologies for Safe and Efficient Utilization of South-to-North Water Diversion Sources in Beijing

2022

### Outstanding Achievement Award of the Chinese Academy of Sciences, Major Contributor

Research Group for Risk Identification and Control of Drinking Water Quality

2021

### Beijing Hydraulic Engineering Society Science and Technology Award, First Prize

Study on the Control Mechanisms of Taste and Odor Issues in Miyun Reservoir Under a Multi-Source Water Supply Framework

2021

### Huaxia Construction Science and Technology Award, Second Prize

Identification Methods, Control Technologies, and Applications for Taste and Odor Compounds in Drinking Water

2020