Curriculum Vitae

Kang Mei, PhD

Contract Associate Professor at **Jiangsu Ocean University**

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Xiamen University, Doctor of Philosophy (2023)

University of Southern California, US, Joint PhD Program (2022)

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Google Schlor : https://scholar.google.com/citations?user=joYHrAYAAAAJ&hl=en

PERSONAL DATA

Birthdate: Aug. 1992 Hometown: Anhui, China

RESEARCH INTERESTS

Coastal & Wetland Ecological Restoration

Trace elements and heavy metals biogeo-cycle

Low-weight-molecular organic molecules

Environmental science and pollution ecology

Marine sciences and microbial ecology

Marine biogeochemistry and earth sciences

EDUCATION & EXPERIENCES

2024.1– Present **Contract Associate Professor, Jiangsu Ocean University, Lianyungang, China**
- Associate research fellow, Jiangsu Institute of Marine Resources Development
- Faculty, Jiangsu Key Laboratory of Marine Bioresources and Environment

2019.9 – 2023.12 **College of Ocean and Earth Sciences, Xiamen University, Xiamen, China**
State Key Laboratory of Marine Environmental Science, Xiamen University
(GPA: 3.56/4.0)

- **Ph.D. candidate**, Marine Environmental Biogeochemistry (Expected June, 2023)
- **Advisor:** Professor Deli Wang (deliwang@xmu.edu.cn)
- **Research project:** Effects of microbial pigments on the diversity and functioning of marine ecosystems.

2021.12 – 2023.1 **Marine Environmental Biology, Dornsife College of Letters, Arts and Sciences**
University of Southern California, United States

- **Visiting Ph.D. student** (12 months)
- **Advisor:** Professor Sergio Sanudo-Wilhelmy (sanudo@usc.edu)
Assistant Professor Laura Gomez Consarnau (gomezcon@usc.edu)
- **Research project:** Laboratory Analysis, Data Arrangement, and Scientific Writing.

2018.6 – 2019.6 **College of the Environment and Ecology, Xiamen University, Xiamen, China**
- **Research assistant**, Institute of Ecological Civilization

2015.9 – 2018.6 **College of the Environment and Ecology, Xiamen University, Xiamen, China**
(GPA: 3.17/4.0)

- **Master**, Pollution Ecology
- **Advisor:** Associate Professor Jingchun Liu (jingchunliu@xmu.edu.cn)
- **Research project:** Effects of arsenic on the physiological responses of mangrove seedlings.

2011.9 – 2015.6 **College of the Ecology & Environment, Hainan Tropical Ocean University, China**
(GPA: 3.46/4.0)

- **B.A.** in Ecology
- **Advisor:** Professor Laijun Zhang (ldxyzhlj@126.com)
- **Research project:** Toxic effects and physiological responses of glyphosate on marine worm *Perinereis aibuhitensis.*

PUBLICATIONS

16. **Kang Mei**, Yitong Pan, Danny Alejandro Osorio, Lizhe Cai, Hualong Hong, Mohammad Mazbah Uddin, Song Wang et al. "Microbial pterins as potential indicators of organic carbon dynamics in estuarine and coastal sediments." ***Catena*** 257 (2025): 109147. https://doi.org/10.1016/j.catena.2025.109147

(IF2024 =5.7, JCR: Q1)

15. **Kang Mei**, Yitong Pan, Faisal Hamzah, Mohammad Mazbah Uddin, Xuri Dong, Lizhe Cai, Bin Xie, Nengwang Chen, and Deli Wang (2025). Microbial pterin biomolecules facilitate algal blooms in response to nutrient pressure in estuarine and coastal continuum. ***Marine Pollution Bulletin***, 217, 118137. https://doi.org/10.1016/j.marpolbul.2025.118137 (IF2025 =4.9, JCR: Q1)

14. Uddin, Mohammad Mazbah, **Kang Mei,** Bin Xie, Li Cunlu, Shengxing Long, and Fuliu Xu. (2024). How Does Mangrove Restoration or Reforestation Change Trace Metal Pollution in Mangrove Ecosystems? A Review of Current Knowledge. ***Toxics.*** 12(11), 812. https://doi.org/10.3390/toxics12110812. (IF2024 =4.2, JCR: Q2)

13. Xiaoyu Zhao, Lizhe Cai, Yiyong Rao, Deyuan Yang, Xiping Zhou, Deli Wang, **Kang Mei.** (2024) Comparison of macrozoobenthic communities and environmental variables in the subtidal zones between a nearly closed bay and an open bay, ***Regional Studies in Marine Science***. https://doi.org/10.1016/j.rsma.2024.103464. (IF2024 =2.1, JCR: Q2)

12. **Kang Mei**, et al. (2024), Dynamics and geochemical responses of dissolved metals (Mn and Cu) in a subtropical estuary, China, ***Environmental Science and Pollution Research***. https://doi.org/10.1007/s11356-023-31387-7. (IF2024 =5.8, JCR: Q1)

11. **Kang Mei**, et al. (2023), Stimulation of oxalate root exudate in arsenic speciation and fluctuation with phosphate and iron in anoxic mangrove sediment, ***Marine Pollution Bulletin***. https://doi.org/10.1016/j.marpolbul.2023.114823. (IF2022 = 7.001, JCR: Q1)

10. Guirong Wu, **Kang Mei**, Caimei He, Sujuan Wang, Liling Jiang (2022). Phytoextraction and Antioxidant Defense of Mangrove Seedling (*Kandelia obovata*) to Inorganic Arsenate Exposure. ***Water***, https://doi.org/10.3390/w14040643. (IF2022 = 3.530, JCR: Q2)

9. Yitong Pan, Deli Wang, **Kang Mei**, Tian Tang (2022). Optimization modeling and mechanism discussion on specific industrial coal-washing wastewater treatment. ***International Journal of Environmental Science***, https://doi.org/10.1007/s13762-022-04738-z. (IF2022 = 3.519, JCR: Q3)

8. Lide Gu, Xinli Yue, Haowen Zhong, **Mei Kang**, Deli Wang (2022). A new technique of quantifying protoporphyrin IX in microbial cells in seawater, ***Frontiers in Marine Science***, https://doi.org/10.3389/fmars.2022.991126. (IF2022 = 5.247, JCR: Q1)

7. Zhenli Guo, Jingchun Liu, jiajia Wu, Dan Yang, **Kang Mei**, Hanyi Li, Haoliang Lu, Chongling Yan. (2022). Spatial heterogeneity in chemical composition and stability of glomalin-related soil protein in the coastal wetlands, ***Science of the Total Environment***, https://doi.org/10.1016/j.scitotenv.2022.155351. (IF2022 = 10.753, JCR: Q1)

6. **Kang Mei**, Deli Wang, Yan Jiang, Mengqiu Shi, Chen-Tung Arthur Chen, Yao Zhang, Kai Tang. (2022). Transformation, Fluxes and Impacts of Dissolved Metals from Shallow Water Hydrothermal Vents on Nearby Ecosystem Offshore of Kueishantao (NE Taiwan), ***Sustainability***, https://doi.org/10.3390/su14031754. (IF2022 = 5.247, JCR: Q2)

5. **Kang Mei**, Wu, G., Liu, J., jiajia Wu, Hong, H., Lu, H., Yan, C. (2022). Dynamics of low-molecular-weight organic acids for the extraction and sequestration of arsenic species and heavy metals using mangrove sediments, ***Chemosphere***, https://doi.org/10.1016/j.chemosphere.2021.131820. (IF2022 = 8.943, JCR: Q1)

4. **Kang Mei**, Jingchun Liu, Jin Fan, Xin Guo, Yi Zhou, Haoliang Lu, Chongling Yan. (2021). Low-level arsenite boosts rhizospheric exudation of low-molecular-weight organic acids from mangrove seedlings (*Avicennia marina*): Arsenic phytoextraction, removal, and detoxification. ***Science of the Total Environment***. 775, 145685. https://doi.org/10.1016/j.scitotenv.2021.145685. (IF2021 = 10.753, JCR: Q1)

3. **Kang Mei**, Jingchun Liu, Rongrong Shi, Xin Guo, Haoliang Lu, Chongling Yan. (2020). The migrated behavior and bioavailability of arsenic in mangrove sediments affected by pH and organic acids. ***Marine Pollution Bulletin***, 159, 111480. https://doi.org/10.1016/j.marpolbul.2020.111480. (IF2021 = 7.001, JCR: Q1)

2. Laijun Zhang, *Jingfen Jia,* ***Kang Mei****, Deli Lin. (2015). Defend effects of melatonin on protoplasts of Gentiana Macrophylla* under UV-B irradiation. ***Journal of Nuclear Agricultural Sciences***, 29(5): 0830-0835. (In Chinese with English abstract)

1. Laijun Zhang, Jingfen Jia, Fengqin Wang, **Kang Mei** (2015). Effect of exogenous melatonin on the growth of in vitro cultured *Polygonum cuspidatum* [J]. ***Jiangsu Agricultural Sciences***, 43(8): 58-60. (In Chinese)

PROJECTS

- **Kang Mei**, Ecological detoxification mechanism of carbon-driven regulation of inorganic arsenic stress in wetland roots, 2025-2027, China Postdoctoral Science Foundation, project approved, PI.
- **Kang Mei**, Research on the ecological restoration mechanism of heavy metal arsenic in salt marsh sediments mediated by rhizosphere low molecular weight organic acids, 2024-2027, Jiangsu Provincial Natural Science Foundation Youth Fund, project approved, PI.
- **Kang Mei**, Research on the spatiotemporal distribution and regulation mechanism of microbial organisms in the offshore environment, 2024 to 2028, Jiangsu Ocean University, Lianyungang Haizhou Bay Talent Program, PI.

PATENT

- **Kang Mei**, Mengqiu Shi, Deli Wang. (2021). A method for detecting biopterin in marine water body. China Patent: CN111505179B (In Chinese).
- **Kang Mei** et, al. (2024). A method for detecting 5-aminolevulinic acid in red tide seawaters. China Patent (In Chinese), Into Review Stages.
- **Kang Mei** et, al. (2024). A method for the detection of multiple microbial pterins simultaneously in marine algal blooms (In Chinese), Into Review Stages.

ONGOING PUBLICATIONS

1. **Kang Mei**, et al. Dynamics of seasonal microbial biopterin in estuarine and coastal waters, Southeast China. Submitted to **Marine Chemistry** (*Under Review*)
2. **Kang Mei**, et al. Impact of Elevated CO_2 on Microbial Pterins as Marine Biomarkers and Trace Metal Dynamics in Offshore Mesocosms. (***In preparation***)

AWARDS & HONORS

- **Visiting Scholarship for Studying Abroad in US**. China Scholarship Council, China, 2025.
- **Merit Student Honors**. Xiamen University, 2023.
- **ICBC (Industrial and Commercial Bank of China) Scholarship Awards**. Xiamen University, 2023.
- **Scholarship for Studying Abroad**. China Scholarship Council, China, 2022.
- **National Award for Distinguished Ph.D. Student**. Ministry of Education, China, 2021.
- **Mindu International Bank Scholarship Awards**. Xiamen University, 2021.
- **First Prize in Provincial College Challenge Cup Competition**. Fujian Province, 2021.

- **First-class Scholarship Awards**. Xiamen University, 2019-2023.
- **Excellence Merit Student Honors**. Xiamen University, 2020.
- **Zhongtian Ocean Scholarship Awards**. Xiamen University, 2020.
- **Provincial Excellent Summer Social Practice Team,** Fujian Province. 2020.
- **Team Runner-up of Golf tournament**, Xiamen University, 2020.

ORAL PRESENTATION & POSTER

14. Kang Mei, Research on the ecological detoxification mechanism of wetland plant root activities in response to arsenic stress, 2025 Soil and Groundwater Risk Prevention and Control and Ecological Restoration Technology Exchange Conference, July 2025, Huhhot, China (**Oral presentation**).

13. Kang Mei, Distribution regulation and ecological indication of biogenic pterin small molecules along the southeast coast of China, The 10th China Youth Earth Science Forum, May 2025, Hefei, China (**Oral presentation**).

12. Kang Mei, Detoxification mechanism of wetland plant root activity in response to arsenic stress, The 10th China Conference on Ecotoxicology, April 2025, Jiaxing, China (**Oral presentation**).

11. Kang Mei, Microbial pterins indicating organic carbon accumulation and degradability in estuarine and coastal sediments, 2025 Xiamen Symposium on Marine Environmental Sciences, International Conference, January 2025, Xiamen, China (**Oral presentation**).

10. Kang Mei, Biochemical cycling of cellular pterins during a mesocosm phytoplankton spring bloom in an urbanized coastal bay. The 8th China-Southeast Asian Countries Marine Cooperation Forum, November 2024, Jakarta, Indonesia (**Poster presentation**).

9. Kang Mei, Effects of offshore CO2 increase on the evolution and transformation of microbiogenic pterin and trace metals. The 3rd China Fishery Ecological Environment Conference, July 2024, Linyungang, China (**Oral presentation**).

8. Kang Mei, Spatial-temporal Distribution and Regulatory Mechanism of Novel Biomarker Microbial Pterins in Xiamen Bay, China. The 15th UCAS Symposium, October 2023. Hong Kong, China (**Oral presentation**).

7. Kang Mei, Spatial-temporal distribution and source of regulation of microbial pteridines in the euphotic layer of South China Sea. The CESS 2023, July 2023. Shanghai, China. (**Poster presentation**)

6. Kang Mei, Novel indicator of biopterin to interactions and perturbations associated with trace metals in estuarine and coastal waters, Southeast China. The 14th UCAS Symposium, March 2022. Taiwan, China (**Online oral presentation**).

5. Kang Mei, Mengqiu Shi, Deli Wang. Heavy metal migration, fluxes and potential impacts of submarine hydrothermal ecosystem offshore Kueishantao Islet, Taiwan. The CESS 2023, July 2021. Shanghai, China. (**Poster presentation**)

4. Kang Mei, Mengqiu Shi, Deli Wang. Analysis of pivotal metabolic precursor-pterins in marine phytoplankton and bacteria. The 7th Symposium on Biological and Organic Geochemistry, October 2020. Beijing, China. (**Oral presentation**)

3. Kang Mei, Mengqiu Shi, Deli Wang. Development of analyzing pivotal metabolic precursor-pterins in the ocean. The Fifth MEL Graduate Forum, Xiamen University. August 2020. Zhangzhou, China. (**Oral presentation**)

2. Kang Mei, Mengqiu Shi, Deli Wang. A new method of measuring biopterin in phytoplankton and bacteria. Identification of biopterin – a key biological metabolic precursor in marine microbes. The First Marine Biological Science and Technology Graduate Forum, Xiamen University. November 2019. Xiamen, China. (**Oral presentation**)

1. Kang Mei, Mengqiu Shi, Deli Wang. A new method of measuring microbial biopterin in fresher water and coastal sea. Annual Session of MEL, Xiamen University. November 2020. Quanzhou, China. (**Poster presentation**)