Dr. Zhou Liang

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Education

2020 – 2024	**Ph.D.** in chemical oceanography at Florida State University, Tallahassee, FL. Advisor: Dr. Angela Knapp
2018 – 2020	**M.S.** in chemical oceanography at Florida State University, Tallahassee, FL. Advisor: Dr. Angela Knapp
2014 – 2018	**B.S.** in chemistry w/ marine concentration at Ocean University of China, Qingdao, China

Professional Experience

2024 - current	**Postdoctoral Fellow.** Biosphere Sciences and Engineering – Global Ecology, Carnegie Science. Supervisor: Dr. Emily Zakem
2022 – 2024	**Graduate Teaching Assistant.** Dept. of Earth, Ocean, and Atmospheric Science, Florida State University, Tallahassee, FL.

2018 - 2024	**Graduate Research Assistant.** Dept. of Earth, Ocean, and Atmospheric Science, Florida State University, Tallahassee, FL, Dr. Angela Knapp lab collaborated with Dr. Robert Letscher at University of New Hampshire. Project: Dissolved organic phosphorus controls on marine nitrogen fixation and export production. Funding: NSF-OCE 1829916 and 1829916
2017 - 2018	**Undergraduate Research Assistant.** Ocean University of China, Qingdao, China. Dr. Yu Xin lab Project: Solid phase extraction of marine dissolved organic nitrogen
2017 summer	**Laboratory Technician.** Ocean University of China, Qingdao, China. Dr. Guilin Zhang lab Project: Measuring methane concentrations in the ocean and Huanghe River

Research Interests

Marine biogeochemistry; climate change; nutrient cycle; dissolved organic matter; biogeochemical modeling; nitrogen; phosphorus; ocean productivity

Publications

* Denotes corresponding authors

2024	**Liang, Z.***, Marconi, D., D.M. Sigman, and Knapp, A. N., Production and consumption of dissolved organic nitrogen (DON) across the South Pacific: an isotopic perspective from a zonal transect. **(in preparation)**
2024	**Liang, Z.***, Letscher, R.T., and Knapp, A. N. Oligotrophic Ocean New

Production Supported by Lateral Transport of Dissolved Organic Nutrients. https://doi.org/10.22541/essoar.172745152.22046530/v1 (**preprint**)

2023 Inomura, K.*, Nishimura, Y., Armin, G., Letscher, R.T., **Liang, Z**., Pasquier, B., Lønborg, C., Deutsch, C., and Yoshizawa, S. Quantitative analysis of light harvesting by rhodopsin containing ocean prokaryotes. Nature Communications. (**under review**)

2023 **Liang, Z.***, Letscher, R.T., and Knapp, A. N., Global patterns of surface ocean dissolved organic matter stoichiometry. Global Biogeochemical Cycles, 37, e2023GB007788. https://doi.org/10.1029/2023GB007788 **5 citations**

2022 **Liang, Z.***, McCabe, K., Fawcett, S.E., Forrer, H.J., Jeandel, C., Marconi, D., Planquette, H., Saito, M.A., Sohm, J.A., Thomas, R.K., Letscher, R.T., and Knapp, A. N., A global ocean dissolved organic phosphorus (DOP) concentration database (DOPv2021), Scientific Data, 9, 722, https://doi.org/10.1038/s41597-022-01873-7 **15 citations**

2022 **Liang, Z.***, Letscher, R.T., and Knapp, A. N., Dissolved organic phosphorus concentrations in the surface ocean controlled by both phosphate and iron stress; Nature Geosciences, 15(8), 651-657, https://doi.org/10.1038/s41561-022-00988-1 **28 citations**

2022 Letscher, R.T.*, Wang, W.-L., **Liang, Z.**, and Knapp, A.N., Regionally variable contribution of dissolved organic phosphorus to marine annual net community production, Global Biogeochemical Cycles, 36, e2022GB007354. https://doi.org/10.1029/2022GB007354 **8 citations**

2021 Yan, Z., Yang, N., **Liang, Z.**, Yan, M., Zhong, X., Zhang, Y., Xu, W. and Xin, Y.*, Active dissolved organic nitrogen cycling hidden in large river and environmental implications. Science of The Total Environment, 795, 148882. https://doi.org/10.1016/j.scitotenv.2021.148882 **17 citations**

2020 **Liang, Z.**, Pan, Y., Zhu, S., Luo, C., Tan., L.*, Spatiotemporal distribution and influencing factors of total suspended particles in the Yangtze River Estuary adjacent sea area[J].Journal of Xiamen

University(Natural Science),59(S1):50-55.https://doi.org/10.6043/j.issn.0438-0479.202007117(in Chinese)
1 citation

2020 **Liang, Z.**, Pan, Y., Zhang, J., Dong, H., Tan., L.*, Data analysis of marine variables in the Yangtze River Estuary adjacent sea area in summer of 2016[J].Journal of Xiamen University(Natural Science),59(S1):69-74.https://doi.org/10.6043/j.issn.0438-0479.202007115 (in Chinese)

2020 Pan, Y., **Liang, Z.**, Wang, H., Wan, L., Tan, L., Ge, T.*, The distribution and influence factors of COD in the Yangtze River Estuary adjacent sea area[J].Journal of Xiamen University(Natural Science),59(S1):63-68.https://doi.org/10.6043/j.issn.0438-0479.202007116 (in Chinese)

Data Product

* Denotes corresponding authors

2022 Knapp, A. N., Letscher, R. T., **Liang, Z.*,** DOP concentration observations from the global ocean between 1990 and 2021 (DOP N2 fixation and export production project). Biological and Chemical Oceanography Data Management Office (BCO-DMO). https://doi.org/10.26008/1912/bco-dmo.855139.4

Field Work

2019 Cruise in the Gulf of Mexico, studying carbon, nitrogen, and iron cycling. 4 days, Vessel: R/V Weatherbird

2018 Cruise in the Jiaozhou Bay and Yellow Sea, 14 days, Vessel: R/V dongfanghong 2

2016 Cruise in Changjiang Estuary and coast investigation in zhoushan islands, Vessel: R/V Zhehaike 1

Conferences and Workshops

2024 2024 Ocean Sciences Meeting, New Orleans, LA, United States. **(oral presentation)**
Topic: “Evaluating the Southern Ocean source of organic

nutrients to the subtropical South Pacific”

2023 Chemical Oceanography Gordon Research Conference (GRC), Southern New Hampshire University, NH, United States. **(poster)**
Topic: “Dissolved organic phosphorus production and consumption in the global surface ocean”

2023 Chemical Oceanography Gordon Research Seminar (GRS), Southern New Hampshire University, NH, United States. **(invited talk)**
Topic: “Dissolved organic phosphorus concentrations in the surface ocean controlled by both phosphate and iron stress”

2023 Luncheon Seminar, Xiamen University, Xiamen, China. **(invited talk)**
Topic: “Thinking as a data scientist --- What controls dissolved organic phosphorus distribution in the global surface ocean?”

2023 Southern University of Science and Technology, Shenzhen, China. **(invited talk)**
Topic: “What controls dissolved organic phosphorus distribution in the global surface ocean?”

2023 Ocean University of China, Qingdao, China. **(invited talk)**
Topic: “What controls dissolved organic phosphorus distribution in the global surface ocean?”

2023 The Sixth Xiamen Symposium on Marine Environmental Sciences. (**virtual talk)**
Topic: “Comparative surface ocean DOC:DON:DOP stoichiometry between the Atlantic and Pacific Oceans”

2022 2022 Ocean Sciences Meeting. (**virtual talk**)
Topic: “Dissolved organic nitrogen concentration and d15N distribution along a zonal transect in the South Pacific”

2021 2021 ASLO meeting. (**virtual talk**)
Topic: “Phosphate and iron control global surface ocean

	dissolved organic phosphorus concentrations."
2020	2020 Ocean Sciences Meeting, San Deigo, CA, United States. (**poster**) Topic: "Dissolved organic phosphorus (DOP) distributions in the eastern Indian Ocean and subtropical South Pacific Ocean"
2019	Tutorial-based Ocean Circulation Inverse Model (OCIM) workshop, Woods Hole, MA, United States. (**participant**)

Teaching Experiences

2023 Fall	Teaching assistant, Florida State University. Assisted in "Environmental Science Capstone", including preparing water analysis kits for field work, leading field trips and grading assignments.
2023 Spring	Invited instructor for two lectures of the course "Geochemical Ocean Tracers" at Florida State University
2023 Spring	Teaching assistant, Florida State University. Assisted in "Introduction to Environmental Science"
2022 Fall	Teaching assistant, Florida State University. Assisted in "Introduction to Environmental Science"

Professional Memberships

American Geophysical Union (AGU), American Society for Limnology and Oceanography (ASLO), US Chess Federation (rating: 1772)

Manuscript Referee

Marine Chemistry, Earth System Science Data, Marine Pollution Bulletin, Science of the Total Environment, Journal of Environmental Management

Programming skills

Matlab, Python, R, Julia

Honors and Awards

2016-2017	Scholarship Award for Excellence in Academic Work, Ocean University of China
2015-2016	Scholarship Award for Excellent Students, Ocean University of China
2015-2016	Scholarship Award for Excellence in Academic Work, Ocean University of China
2014-2015	Scholarship Award for Excellence in Academic Work, Ocean University of China