Haodong Xu

PhD Candidate at The University of Tokyo

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A short Introduction: I research on microplastics transport in the North Pacific based on cruise observation, experimental analysis and particle tracking model. By delivering ocean plastic pollution assessment, we can provide guidance and action plan to decision-makers and the public, towards healthy sea and sustainable ocean.

Education

Ph.D. The University of Tokyo — Apr. 2023~
Supervisor: Prof. Shin-Ichi Ito

M.S. Tokyo University of Marine Science and Technology (TUMSAT) — Sep. 2021
Supervisor: Prof. Hisayuki Arakawa

B.S. Shanghai Ocean University — Jun. 2019
Marine Technology

Exchange at TUMSAT — Apr. 2018~Mar. 2019

Publications

5. **Xu H.**, Matsumura Y., Yamashita R., Nakano H., Ito S.
Heterogeneous seafloor deposition of heavy microplastics in the North Pacific estimated over 65 years
Marine Pollution Bulletin, 211 (2025) 117536

4. Celik M., Yang Z., **Xu H.**, Nakano H., Isobe A., Arakawa H.
Carbonyl index of miniaturized microplastics at the sea surface.
Marine Pollution Bulletin, 211(2025)117376.

3. **Xu H.**, Nakano H., Tokai T., Miyazaki T., Hamada H., Arakawa H.
Contamination of sea surface water offshore the Tokai region and Tokyo Bay in Japan by small microplastics.
Marine Pollution Bulletin, 185(2022)114245.

2. **Xu H.**, Arakawa H.
Determination of appropriate particle quantity on a filter for small microplastics analysis

by microscopy.
Methodx 9, (2022)101646.

1. Wang Y., Nakano H., **Xu H.**, Arakawa H.
Contamination of seabed sediments in Tokyo Bay by small microplastics particles.
Estuarine Coastal and Shelf Science, 261(2021)107552.

Projects

3. UTokyo-Nippon Foundation FSI Marine Litter Solution Project.
My role (2023~2025): related to theme 1 of act 1, engaging on data analysis of particle tracking model.

2. Elucidation of the process of marine microplastics fragmentation and removal from the surface water based on long-term time-series sample analysis.
My role (2023~2025): developing plastic emission model and coupling it with particle tracking model that reproduces 65 years distribution and transport of microplastics.

1. Elucidation of collection characteristics of neuston nets toward standardization of marine microplastic sampling.
My role (2019~2021): developing the double Neuston net and testing the function in both inner bay and open ocean.

Awards and Honors

Spring GX fellowship	2023~2026
JSPS DC2 fellowship	2024~2026
JpGU 2024 Outstanding Student Presentation Award	2024
Idea Environment and Art Foudation Scholarship	2021

Professional Affiliations

The Oceanographic Society of Japan

Japan Geoscience Union