

Special Issue

Ecology of Sea Ice Algae

Message from the Guest Editor

Sea ice algae play a significant and important role in polar regions. They are the only carbon source in the food chain during the ice-covered spring period in which light increases, though also regulated by the snow cover. The question is: how can low-light-adapted ice algae cope with the foreseen decrease in snow cover thickness and increased light transmittances? What are the effects of these factors on the ecology of sea ice algae and their trophic importance regarding decreasing sea ice extent? What is the importance of sea ice algae in the exchange of CO₂ between atmosphere, sea ice, and water? There is a need for ice algae-sympagic biota interactions and more detailed studies of sympagic-pelagic-benthic couplings. The purpose of the invited Special Issue is to publish new research with a focus on the ecological role of sea ice algae and their ecology. The Special Issue will publish high-quality papers on the following topics from both the Arctic and Antarctica:

- Trophic relations;
- Adaptation strategies;
- Modelling;
- New techniques;
- Seeding by ice algae;
- Ice algae and bacteria;
- Extreme environment.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Journal of Marine Science and Engineering (JMSE, ISSN: 2077-1312) focuses on research in the fields of Ocean Engineering, Coastal Engineering, Physical Oceanography, Geological Oceanography, Marine Biology, and Marine Environmental Science. It publishes reviews, regular research papers, and short communications, as well as Special Issues on particular subjects. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the maximum length of the papers.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.5 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the second half of 2025).