



Biogeochemistry of Arctic and Antarctic Sea Ice

Guest Editors:

Dr. Nikolai Pedentchouk

School of Environmental
Sciences, University of East
Anglia, Norwich NR4 7TJ, UK

Dr. Maxim Kulikovskiy

K.A. Timiryazev Institute of Plant
Physiology RAS, IPP RAS, 35
Botanicheskaya St., 127276
Moscow, Russia

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Message from the Guest Editors

Dear Colleagues,

Sea ice is a crucial component of the Earth's climate system. It hosts a diverse community of primary producers, thus providing a key habitat for one of the most unique ecosystems on Earth. The morphological, genetic, and biochemical characteristics of microbial and microalgal primary producers can provide a wealth of information about their habitat and ambient climatic conditions. These characteristics are key to interpreting marine micropalaeontological and organic geochemical records in the Arctic and Antarctic regions.

The purpose of this Special Issue is to gather the recent developments in the biology and molecular and stable isotope geochemistry of primary producers to develop an integrated approach for linking their biological and biogeochemical characteristics with evolutionary and environmental factors in the polar regions.

We welcome contributions that broadly cover the following topics:

- systematics and ecology of sea-ice microalgae;
- algal biomarkers, with focus on their chemistry, occurrence, and application in paleoclimate studies;
- stable isotopes of biomarkers from diatoms and other microalgae.





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Editor-in-Chief

Prof. Dr. Jesus Martinez-Frias

Instituto de Geociencias, IGEO
(CSIC-UCM), C/ Del Doctor Severo
Ochoa 7, Edificio
Entrepabellones 7 y 8, 28040
Madrid, Spain

Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherent set of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientifically based political decisions.

We are committed to drive *Geosciences* to a position in which it is recognized for its high-quality, cutting-edge research and scientific influence, and strongly encourage and invite your participation and manuscripts.

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Geosciences Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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