JGR-Oceans special issue

Call for Papers for "Uncovering the hidden links between dynamics, chemical, biogeochemical and biological processes under the changing Arctic"

Submission Open: August 31 2020
Submission Deadline: March 31 2022

Special Section Organizers:
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Catastrophic reduction of sea ice in the Arctic Ocean would exacerbate multi environmental stresses, including warming, acidification, and stratification. What are the missing links in oceanographic process (physical, chemical, biogeochemical and biological processes) with the rapid changes in the Arctic? In order to answer this question, Japanese and Korean national projects, Arctic Challenge in Sustainability (2015-2020) and the Korea-Arctic Ocean Observing System (2016-2020), and international projects, GEOTRACES, GO-SHIP and Pacific Arctic Group have tackled urgently and conducted the intensive survey. Various new findings, meso-scale eddies, changes in the lower trophic level organisms, specific functions of nitrogen cycle, influence of ocean acidification on calcifiers, and geochemical characteristics in the water column are reported. This special section of the Arctic would be of interest and beneficial to the oceanographic community of JGR-Oceans, and our national and international collaborative efforts will be timely manner and significantly promote further collaborative researches in near future.

17 manuscripts has been published.

Trophic Dynamics of Calanus hyperboreus in the Pacific Arctic Ocean, Hyuntae Choi et al.,

Insights Into Water Mass Origins in the Central Arctic Ocean From In-Situ Dissolved Organic Matter Fluorescence, Colin A. Stedmon et al.,

Impact of Sea-Ice Dynamics on the Spatial Distribution of Diatom Resting Stages in Sediments of the Pacific Arctic Region, Yuri Fukai et al.,

Biogeochemical Cycling of Colloidal Trace Metals in the Arctic Cryosphere, Laramie T. Jensen et al.,

Particulate Export of PAHs Firstly Traced by 210Po/210Pb Disequilibrium: Implication on the "Shelf Sink Effect" in the Arctic Ocean, M. Liu et al.,

On Using Si to Unravel Potential Sources of Dissolved Al to the Deep Arctic, C. I. Measures and M. Hatta

The Transpolar Drift Influence on the Arctic Ocean Silicon Cycle, Bianca T. P. Liguori et al.,

Interannual variation of settling particles reflects upper-ocean circulation in the southern Chukchi Borderland, 2010-2014, Jonaotaro Onodera et al.,

Numerical Simulations of Internal Solitary Wave Evolution Beneath an Ice Keel, Peiwen Zhang et al.,

Spatial and Interannual Patterns of Epipelagic Summer Mesozooplankton Community Structures in the Western Arctic Ocean in 2016–2020, Jee-Hoon Kim et al.,

The Potential of 233U/236U as a Water Mass Tracer in the Arctic Ocean, E. Chamizo et al.,

Strong Margin Influence on the Arctic Ocean Barium Cycle Revealed by Pan-Arctic Synthesis, Laura M. Whitmore et al.,

Transport Processes of Seafloor Sediment From the Chukchi Shelf to the Western Arctic Basin, Eiji Watanabe et al.,

A Refinement of the Processes Controlling Dissolved Copper and Nickel Biogeochemistry: Insights From the Pan-Arctic, Laramie T. Jensen et al.,

PAHs in the North Atlantic Ocean and the Arctic Ocean: Spatial Distribution and Water Mass Transport, Mengyang Liu et al.,

Distribution, Sources, and Dynamics of Particulate Matter Along Trans-Arctic Sections, Wilford D. Gardner et al.,

Spatial Distributions of Riverine and Marine Dissolved Organic Carbon in the Western Arctic Ocean: Results From the 2018 Korean Expedition, Jinyoung Jung et al.,