



Workshop Call: Horoman Mantle Drilling and Carbon Injection
August 25-28, 2026 at Hokkaido, JAPAN

We invite applications to attend an international workshop to develop the ICDP drilling proposal for the Horoman peridotite massif, located in southern Hokkaido, Japan. The project involves drilling into the peridotite body and injecting CO₂ into the borehole. The Horoman peridotite massif is characterized by its exceptionally low degree of serpentinization, in which the reaction mechanisms may differ from those of highly altered peridotites, such as the Oman ophiolite. The high reactivity of carbon with mantle rocks could significantly contribute to the global carbon sink. Knowledge of carbon mineralization in the mantle can also be applicable to subsurface CO₂ sequestration, which represents a safe and long-term storage mechanism that converts CO₂ into a stable solid. We invite researchers from the international scientific community, representing a broad range of disciplines, including but not limited to petrology, alteration mechanisms, carbonate reactions, thermodynamic modeling, in-situ carbon fixation, structural geology, fluid chemistry, microbiology, and industry.

The principal objective of the workshop is to pave the way for the preparation and submission of an ICDP drilling proposal. Specific workshop goals include: i) Development of a strategy for the Horoman drilling and CO₂ injection, as well as related sampling and monitoring experiments; ii) Discussion of laboratory and field-scale experiments to gain insights into peridotite carbonation processes, comparing experimental and natural settings; iii) Definition of baseline data and information for comparison with other peridotite massifs, and understanding the role of alteration; iv) Improving our understanding of the chemical and physical mechanisms of mantle carbonation; and v) Application of engineered carbon mineralization expertise to peridotite systems.

Workshop Venue: Hotel Mt. Apoi, Samani, Hokkaido 058-0004, Japan

Application: Submit your contact information, areas of expertise, and intended contribution to the project via the Google Form <https://forms.gle/MTLcihoe7rikrcTo6>

(If submission via the Google Form is not feasible, please contact the PI, katayama@hiroshima-u.ac.jp)

Deadline: May 8, 2026

Participants will be selected by a steering committee and invited on the basis of the relevance of their expertise to the project and workshop, as well as the need for balanced representation of expertise, disciplines, and career stages. Early career scientists are encouraged to apply. Please contact the project PI (Ikuro Katayama, katayama@hiroshima-u.ac.jp) for any question.