

Title **Deep-water sub-seabed CO₂ storage and its environmental impact assessment**

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Date & Time Friday, May 10, 2013 4:00 p.m.

Place I²CNER Hall, Ito campus, Kyushu University

Abstract

For the realization of CCS as a mitigation measure against the global warming, the acquisition of public acceptance has become indispensable and, for this purpose, the environmental impact assessment method needs to be established. Japan has deep seas near the coast lines and should consider the CCS in the deep ocean. The difference between sub-seabed CCS in the deep ocean and that in the shallow water, like the METI project, is that, socially, the former can avoid public objection called NIMBY (not in my backyard) or fishery compensation and that, physically, the former has little leakage risk due to gas-hydrate formation. Therefore, enabling more stable storage is expected in an earthquake-prone country, Japan, with compensating the shortage of quantitative capacities of the shallow-water CCS. Sub-seabed CO₂-hydrate formation in the deep sea should be investigated to understand its effect on the prevention of seepage of CO₂ into the seawater and environmental impacts of dissolution of CO₂ in the seawater.

About the Speaker

Prof. Toru Sato has been engaged in environmental impact assessment of CO₂ sub-seabed geological storage (CCS), development and application of multi-scale ocean model, development of dissociation and formation models of methane and CO₂ hydrate, design and feasibility study on CO₂ storage in the form of gas hydrate and has written number of articles on the topics in internationally influential journals. He has also devoted himself as the members of some governmental committees, such as Technical Committees on CO₂ Ocean Sequestration of RITE, Sub-Seabed CCS of RITE, Environmental Impact Assessment for Sub-Seabed CCS of MOE, Antarctic Expedition Ship of MEXT, Ocean-Space Collaboration of JAXA, *etc.* From April 2013, he has been taking a position of Chair of Environmental Studies, Graduate School of Frontier Sciences, University of Tokyo.

Host: Associate Professor Kiminori Shitashima

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