

# Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

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HRE031-08

Room:303

Time:May 24 10:15-10:30

## A solution to CO<sub>2</sub> geological storage problems in Japan

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Geological structure of the Japanese Islands is very complex because that is located in front of the subduction zone of the Pacific Plate and Philippine Sea Plate. The geological storage project near the emission source in Japan must target relatively younger formations. In this circumstance, there are the specific geological problems of Japan that must be solved.

- 1) Sealing efficiency of the seal formation (mechanical stability and large porosities).
- 2) Uncertainty of CO<sub>2</sub> movement in the inhomogeneous reservoir.
- 3) Treatment of the active faults and folds that form the basins (i.e. reservoirs).
- 4) Small capacities of one reservoir (basins).

We have conducted several study to solve its geological problems and to build Japan-type CCS.

- a) Mechanical stability of soft seal formations.
- b) Capillary sealing efficiency of soft seal formations.
- c) Accurate reservoir models using seismic inversion and rock physics.

Keywords: CO<sub>2</sub> aquifer storage, Japan-type CCS, Soft seal formation, Mechanical stability, Capillary sealing efficiency, Seismic inversion