Toward an evaluation of geochemical trapping of CO2 in open aquifer storage; researches in Geological Survey of Japan, AIST

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As the climatic effect of global warming has become sensible, a need for immediate action for CO2 emission reduction is widely recognized in these days. Geologic storage of CO2 to a deep saline aquifer is considered to be the most feasible methods. Geologic sequestration of CO2 to a deep saline aquifer is considered to be the most feasible methods. Geological Survey, AIAT, has been conducting a three-year research project on open aquifer CO2 storage, taking the Tokyo Bay area as a hypothetical site. This paper summarizes geochemical studies concerning to geochemical trapping of CO2. Our studies include following sub-themes; 1) the natural analogue studies, such as the geochemistry and rock-water interaction in CO2-bearing springs and diagenetic changes of sedimentary rocks, 2) geochemical study of deep groundwater in young sedimentary basins, 3) geochemical simulation and experiments in a chemical system of underground reservoirs. Current status of our research project will be presented in the session.