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On the Geological Storage Research at AIST

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A large-scale demonstration project has been conducted by METI for CO2 geological storage. To provide technical support, we have embarked on the 2nd phase of CO2 geological storage research aimed at creating a versatile, general-purpose technical foundation.

We have launched research in the following areas commissioned by the Research Institute of Innovative Technology for the Earth (RITE) under a Ministry of Economy, Trade and Industry grant: Enhancement of the precision of simulation models for predicting long-term behavior, Development of combined monitoring methods and Development of methods of assessing CO2 movement in interbedded sandstone and mudstone formations. We will also apply a geophysical postprocessor for the STAR general-purpose reservoir simulator, which was originally developed for geothermal research, to predict CO2 behavior.

Moreover, the joint research works with US research institutes were started. For development of cost-effective monitoring technology, we will collaborate with the Los Alamos National Lab. For development of modeling technologies including geomechanical processes, we collaborate with the Lawrence Berkeley National Lab.

Some of these works were performed under the management of the Ministry of Economy, Trade and Industry (METI) as a part of the research and development on CO2 geological sequestration project conducted by RITE.

Keywords: CCS, CO2, Geological Storage, Modeling, Monitoring