

International Symposium on Site Characterization for CO₂ Geological Storage

Several technological options have been proposed to stabilize atmospheric concentrations of CO₂. One proposed remedy is to separate and capture CO₂ from fossil-fuel power plants and other stationary industrial sources and to inject the CO₂ into deep subsurface formations for long-term storage and sequestration.

Characterization of geologic formations for sequestration of large quantities of CO₂ needs to be carefully considered to ensure that sites are suitable for long-term storage and that there will be no adverse impacts to human health or the environment. The Intergovernmental Panel on Climate Change (IPCC) Special Report on Carbon Dioxide Capture and Storage (Final Draft, October 2005) states that "Site characterization, selection and performance prediction are crucial for successful geological storage. Before selecting a site, the geological setting must be characterized to determine if the overlying cap rock will provide an effective seal, if there is a sufficiently voluminous and permeable storage formation, and whether any abandoned or active wells will compromise the integrity of the seal....Moreover, the availability of good site characterization data is critical for the reliability of models."

This International Symposium on Site Characterization for CO₂ Geological Storage (CO₂SC) addresses the particular issue of site characterization and site selection related to the geologic storage of carbon dioxide. Presentations and discussions cover the various aspects associated with characterization and selection of potential CO₂ storage sites, with emphasis on advances in process understanding, development of measurement methods, identification of key site features and parameters, site characterization strategies, and case studies.

Papers addressed the following topics:

- Site Selection and Characterization: General Framework
- Site Characterization Methods
- Regional-Scale Site Selection
- Site Characterization Case Studies
- Leakage from Storage Formations: Pathways, Effects, and Implications for Site Characterization
- Fundamental Processes and Technical Issues Related to Site Characterization
- Screening and Characterization Tools
- Regulatory and Social Issues