Special Issue

Implications of THMC Processes on Long-Term Safety of Geological Disposal of Radioactive Waste, 2nd Edition

Message from the Guest Editors

Dear Colleagues Geological disposal consists in placing waste in a repository at depths of hundreds of meters in a suitable rock formation. Research in coupled THMC processes has been active for the last few decades, resulting in ever-improving capabilities of mathematical models for THMC processes to predict experiments conducted at different research institutions and underground research facilities. At present, many countries have moved past the stage of concept development and fundamental research and have started or are close to implementing geological disposal. Therefore, we believe it is timely to consider the following questions:

- How do coupled THMC processes impact the containment and isolation of a DGR? When do they need to be considered and when can they be neglected?
- How confident are we that coupled THMC models could be used to evaluate the long-term evolution of a DGR (up to 1 million years) while they are typically developed and validated using short-term experiments?

The editors therefore invite contributions, either in the form of a thematic review or the reporting of original research that can shed some light on the above two questions.

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Minerals welcomes submissions that report basic and applied research in mineralogy. Research areas of traditional interest are mineral deposits, mining, mineral processing and environmental mineralogy. The journal footprint also includes novel uses of elemental and isotopic analyses of minerals for petrology, geochronology and thermochronology, thermobarometry, ore genesis and sedimentary provenance. Contributions are encouraged in emerging research areas such as applications of quantitative mineralogy to the oil and gas, manufacturing, forensic science, climate change, geohazard and health sectors.

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