

Special Issue

Clay Mineral Transformations after Bentonite/Clayrocks and Heater/Water Interactions from Lab and Large-Scale Tests

Message from the Guest Editors

The Special Issue will focus on geochemical and mineralogical processes observed from heating/hydration experiments performed at different scales, which may alter the structure and properties of bentonites and/or clayrocks used as barriers in the context of deep geological disposal of nuclear fuels and radioactive waste. Insights related to the following aspects will be included in this Special Issue:

- Mineral alteration: dissolution and redistribution of primary mineral phases and precipitation/neoformation of secondary minerals;
- Physico-chemical properties modification;
- Redox Chemistry and redox state evolution;
- Microstructure changes affecting sorption processes;
- Clayrock- or Bentonite-groundwater interactions;
- Changes in pore water chemistry;
- Corrosion and metal/interface processes;
- Smectite and other clay mineral structural stability;
- Influence of gases on geochemistry/mineralogy;
- Organics and their influence on geochemistry/mineralogy;
- Microbial-mediated mineral alteration and geochemical evolution;
- Geochemical modeling, reactive transport and computational quantum mechanical modeling.

Guest Editors

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Prof. Dr. Markus Olin

Dr. Lian-Ge Zheng

Dr. Paul Wersin

Dr. James Wilson

Deadline for manuscript submissions

closed (30 June 2021)



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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.2 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).