Special Issue

Clay Minerals: Roles in Oil and Gas Generation, Drilling, and Enhanced Recovery

Message from the Guest Editors

This Special Issue aims to explore the critical interactions between clay minerals and hydrocarbon systems and to expand the applications of clay minerals in the petroleum industry. It will cover a wide range of topics, including but not limited to, the following:

- Clay mineralogy in source rocks: The role of clay minerals in the formation, accumulation, and thermal maturation of organic matter in source rocks.
- Petroleum geology and mineralogy: Relationship of clay mineral content and distribution to hydrocarbon reservoir properties.
- Enhanced oil recovery: The impact of clay minerals on enhanced oil recovery techniques.
- Applications in drilling fluids: The effects of clay minerals on drilling fluid properties and the use of clay-based composites in drilling fluids.
- Environmental considerations: The role of clay minerals in mitigating the environmental impacts during oil and gas production, including their use in pollution control and soil remediation.

We look forward to your valuable contributions.

Guest Editors

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Deadline for manuscript submissions

closed (31 July 2025)

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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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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).

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