Special Issue

Advances in Mantle-Crust Interactions for Petrogenesis and Ore-Forming Processes

Message from the Guest Editors

Mantle–crust interactions are the central focus of petrological research. Enhanced rock sampling and analytical advancements empower geologists to discern the intricate material exchange processes within the deep lithosphere. Whether through the disruption of ancient cratons or the upwelling of mantle–derived materials during continental collision orogenic events, these interactions profoundly reshape the lithospheric structure and composition. This Special Issue aims to address, but is not limited to, the following topics:

- Developing geochemical indicators for identifying mantle-crust interactions in magmatic processes.
- Investigating variations in the strength of mantle-crust interactions during lithospheric evolution and their geodynamic processes.
- Determining the origin of ore-forming materials in specific magmatic deposits—whether from the mantle, crust, or a combination of both.
- Identifying the magmatic evolution processes (e.g., magma mixing, assimilation, and fractional crystallization) during magma ascent and emplacement and their impacts on petrogenesis and mineralization.

Guest Editors

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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.

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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).

