

Special Issue

Mineralogical, Geochemical, Hyperspectral and Isotopic Constraints on the Formation and Discovery of VMS Deposits

Message from the Guest Editors

Since the discovery of actively venting seafloor hydrothermal systems in the late 1970s, volcanogenic massive sulfide (VMS) deposits have become one of the best-understood mineral systems. This Special Issue will focus on techniques and case studies that enhance our understanding of VMS deposits to aid their discovery, such as:

- Characterization of multi-scale alteration assemblages through field mapping, mineralogy, lithogeochemistry, and hyperspectral analysis.
- Mineral chemical studies (e.g., sulfide/silicate LA-ICP-MS) to characterize ore-forming fluids and mineralization processes within individual systems.
- Detailed stratigraphic and volcanological studies to refine targeting in established camps or prospective regions.
- Investigations of stable and radiogenic isotopes within VMS systems to improve our understanding of ore-forming processes, constrain the timing of mineralization, or identify prospective regions.
- The effects of deformation and metamorphism on alteration halos, ore composition, and geometry.
- Reviews on advances in hyperspectral techniques, metamorphosed VMS deposits, Au-rich deposits, or well-established camps.

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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).