Special Issue

Critical Metal Minerals, 2nd Edition

Message from the Guest Editors

The critical metals generally consist of four major elemental groups: rare metals, rare earth elements, rare dispersed elements, and other precious metals. The rapidly growing demand for critical mineral resources worldwide requires new understandings of the characterization of metal-host minerals, the geochemistry and ore genesis of critical metal deposits, and exploration advances aiding in the discovery of new economic targets. In this regard, the present Special Issue is focused on relevant topics, including, but not limited to (1) geochemical exploration, data handling, and statistical analysis for critical minerals of economic and/or environmental importance; (2) mineralogy, geochemistry, geochronology, fluid evolution, and isotopic constraints on the genesis of critical mineral deposits; (3) experimental advances in critical metal behavior during metallogenic processes; (4) geological controls of the global or regional distribution of critical mineral deposits; (5) 3D modeling of critical metal deposits; and (6) the resource assessment of critical minerals and developments in metal extraction and recovery.

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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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JCR - Q2 (Mining and Mineral Processing) / CiteScore - Q1 (Geology)

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.7 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).

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