

Special Issue

Advances in Precious and Critical Mineral Beneficiation and Extraction

Message from the Guest Editors

With the increasing demand for valuable metals, advanced techniques are required for processing complex ore bodies and secondary metal sources or wastes (e.g., printed circuit boards). These complex ore bodies and secondary metal sources host precious and critical minerals that will aid the development of high technology equipment and the transition to a clean energy economy. The current Special Issue focusses on novel and advanced beneficiation and extractive metallurgical methods for precious (e.g., gold, silver, and platinum group metals) and critical (e.g., nickel, cobalt, and rare earth elements) metals recovery and/or extraction from primary and secondary sources. The Special Issue is organized into three sections and invites contributions accordingly:

- Section 1: Advances in physical separation and beneficiation of complex ores and wastes containing precious and critical minerals.
- Section 2: Developments in hydrometallurgical (including biological) and aqueous extraction of complex ores and wastes containing precious and critical minerals.
- Section 3: Advances in electrometallurgical processes for precious and critical metal extraction.

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.

Editor-in-Chief

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

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).