



an Open Access Journal by MDPI

Unlocking Critical Elements in Base Metal Supply Chains: Challenges and Opportunities

Guest Editors:

Dr. Lana Alagha

Department of Mining and Explosives Engineering, Thomas J. O'Keefe Institute for Sustainable Supply of Strategic Minerals, Rolla, MO 65409, USA

Dr. Pengbo Chu

Department of Mining and Metallurgical Engineering, Mackay School of Earth Sciences and Engineering, University of Nevada, Reno, NV 89557, USA

Dr. Kristian Waters

Department of Mining and Materials Engineering, Faculty of Engineering, McGill University, Montreal, QC H3A 0G4, Canada

Message from the Guest Editors

Many critical elements, such as germanium, gallium, selenium, tellurium, arsenic, bismuth, etc., are contained in mineral phases that are closely associated with base metal sulfides. As reported in many studies, most of these critical elements are lost to tailings or other process streams during the early stages of mineral processing (i.e., physical beneficiation) or during the downstream processing (i.e., extractive metallurgy). This Special Issue focuses on the characterization and recovery of critical elements in the base metal supply chain. Possible research topics may include the characterization of critical elements and their carrier mineral phases, mineral processing methods for possible enrichment, and potential extractive metallurgy techniques to recover them. Lift cycle analysis associated with the processing of these elements is also considered.

Deadline for manuscript submissions: **30 November 2024**



Specialsue





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Leonid Dubrovinsky Bayerisches Geoinstitut, University Bayreuth, D-95440 Bayreuth, Germany

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions. **High Visibility:** indexed within Scopus, SCIE (Web of Science), GeoRef, CaPlus / SciFinder, Inspec, Astrophysics Data System, AGRIS, and other databases. **Journal Rank:** JCR - Q2 (*Mining & Mineral Processing*) / CiteScore - Q2 (*Geology*)

Contact Us

Minerals Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/minerals minerals@mdpi.com X@Minerals_MDPI/