

Special Issue

Recent Advances in Separation Techniques for Critical Minerals/Metals, Circular Economy, and Sustainability

Message from the Guest Editors

This Special Issue emphasizes research and development in physical separation techniques and extractive metallurgy methods for mineral processing and resource recycling, as well as environmental remediation, with a specific focus on critical minerals/metals. However, research on other critical resources is also welcome. This collection covers a wide range of topics, including gravity separation, magnetic separation, electrical separation, and flotation. It also explores methods such as leaching, solvent extraction, cementation, adsorption, and precipitation, highlighting their importance in both primary and secondary resource utilization. The goal is to promote a circular economy and carbon neutrality while addressing environmental and sustainability concerns in the extraction and processing of critical minerals/metals.

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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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Journal Rank:

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

Rapid Publication:

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).