

Special Issue

Characterization of Minerals and Raw Materials Resources Replenishment

Message from the Guest Editors

This Special Issue invites submissions that include original scientific research related with the identification and characterization of minerals and critical elements in primary and secondary resources. The Special Issue focuses on the following topics: (1) the occurrence of critical raw materials in nature, and identification of its exploitable mineralogical forms, and exploitability thresholds; (2) mineral resource identification, liberation size, and cut-off grade in secondary raw materials; (3) microscopic and spectroscopic advanced techniques for elemental and mineral identification and classification such as SEM-EDS, QEMSCAN, LIBS, XRF, EDXRF, and RAMAN; (4) hyperspectral imaging for elemental and mineral identification, including HCLI (Hyperspectral Core Logging Imaging); (5) case studies and applications considering ore and industrial minerals as multiple sources of distinct raw materials; (6) case studies and applications considering secondary raw materials as alternative sources for mineral recovery or industrial mineral production; and (7) discoveries and innovative exploration studies of critical mineral raw materials.

Guest Editors

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Deadline for manuscript submissions

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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).