Topical Collection

Mining/Metallurgical Solid Waste Treatment and Resource Utilization: Towards a Circular Economy

Message from the Collection Editors

Global mining and metallurgy generate billions of tonnes of solid waste annually (e.g., tailings, slag), posing severe environmental risks while containing valuable untapped resources. Addressing the treatment and utilization of mining and metallurgical solid waste to extract mineral resources is a pressing requirement for the sustainable development of mineral engineering. Solid waste treatment and utilization contributes to the circular economy by reducing the need for new resource extraction and the environmental impact of mining and metallurgical processes. For this Topic Collection, we welcome the submission of cutting-edge research related to the generation, basic characteristics, treatment, and utilization of mining/metallurgical solid waste. Contributions should delve into key theories and new technologies and methods to transform waste streams into valuable secondary resources. A wide range of topics will be covered, including but not limited to the following:

- Selective metal recovery
- Large-scale utilization
- The synthesis of waste-derived materials
- Secondary resource upgrading

Collection 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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Author Benefits

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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).

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