Special Issue

Bioleaching of Metals: Current Applications and Future Directions

Message from the Guest Editors

The interactions between microbes and minerals have shaped earth's environment for billions of years. Currently, these interactions are applied in sustainable practices such as metal recovery via bioleaching and the bioremediation of contaminated environments. Thus, understanding the mechanisms behind these processes is crucial for advancing eco-friendly technologies and mitigating the environmental impact of industrial activities. This Special Issue aims to present recent advancements in environmental mineralogy and biogeochemistry, focusing on the dynamic relationships between microorganisms, minerals, and their surrounding environments. The Special Issue welcomes submissions that include original scientific research and reviews in the following areas:

- The application of microbial processes for the bioremediation of pollutants and the recovery of valuable metals from ores and industrial waste.
- Community-level studies of microorganisms in mineral-rich environments, supported by bioinformatics and metagenomics approaches.
- Research on the role of microbes in metal and nutrient cycling in natural and contaminated environments.

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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).

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