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Microorganisms in Rare Earth Elements Bioleaching

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Message from the Guest Editors

Dear Colleagues,

The use of microorganisms in the release of metals from low-grade sulfide ores is a well-established technology; recently, however, the application of bioleaching to the release of Rare Earth Elements (REEs) has received increased attention. REEs have become increasingly essential in modern-day technologies with their extensive use in green and smart technologies, such as solar panels and smartphones. However, the recovery of REEs using traditional methods is expensive and energy-intensive, leading to the requirement to develop processes that are more economically feasible and environmentally friendly. The use of REEs-solubilizing microorganisms for the biohydrometallurgical processing of REEs provides a potential biotechnical approach for the recovery of REEs from primary and secondary sources.

This Special Issue will focus on the bioleaching of REEs-bearing minerals and wastes and its underlying mechanisms.

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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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