Special Issue

Advances in the Application of Electrochemistry in Mineral Processing and Extractive Metallurgy

Message from the Guest Editors

Research is becoming more and more specialized to particular problems of multidisciplinary character related to chemistry, physics, biologyand materials science. Electrochemical reactions that are accelerated using catalysts lie at the heart of many processes for extracting minerals from various grade ores. The electrochemical phenomena depends on the electrical properties of the solid material and the redox characteristics of the solution. Electrochemical processes (electrodeposition/electrowinning) involve selective metal recovery with reduced solvent and energy consumption from the leachate solution. Overall, electrochemical approaches in metal recovery have several advantages such as uniformity in metal deposition, high purity, automation, easy control, cost effectiveness, and relatively fast processing time. Electrochemical separation technologies provide a sustainable approach to metal recovery, through possible integration with renewable energy, the minimization of external chemical input, as well as reducing secondary pollution.

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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Journal Rank:

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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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