Special Issue

Experimental and DFT Study on Interaction of Flotation Reagents with Mineral Surfaces

Message from the Guest Editor

Although DFT is a viable tool, validation through experiments is required before the reagents can be employed in processing plants. Therefore, the adaptation of DFT and experiments is crucial to advancing the minerals processing industry. This Special Issue aims to present innovative advances in DFT and experiments regarding the interaction of flotation reagents with mineral surfaces. These combined methods could provide valuable information concerning the enhancement of mineral recovery in the minerals processing industry. This Special Issue welcomes submissions that present original scientific research relating to DFT and the interaction between flotation reagents and mineral surfaces from well-known and/or new minerals deposits. This Special Issue focuses on the following topics: (1) the design and synthesis of flotation reagents; (2) the processing of new deposits and critical minerals for energy; and (3) the application of combined methods to understand the interaction/adsorption of flotation reagents with/on the surface of minerals and highlight the best process for enhancing the recovery of minerals.

Guest Editor

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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:

JCR - Q2 (Mining and Mineral Processing) / CiteScore - Q1 (Geology)

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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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