# Topical Collection

# Flotation Theory and Technology

## Message from the Collection Editors

Flotation, as a pivotal mineral separation technique, relies fundamentally on breakthroughs in its theoretical foundation and process innovations to enable the utilization of low-grade and complex mineral resources. The core of the flotation process hinges on the precise control of the physicochemical properties of mineral surfaces, achieving the efficient separation of target components through reagent–mineral–bubble interfacial interactions. In recent years, interfacial interaction mechanisms at the micro/nano scale, the efficient separation of low-grade/refractory ores, and green and intelligent transformation have emerged as central drivers advancing flotation technology. This Topical Collection focuses on groundbreaking progress in flotation fundamentals, novel flotation processes, the development of environmentally friendly flotation reagents, and intelligent mineral processing technologies. Original research papers encompassing flotation theory, processes, equipment, and interdisciplinary applications are solicited, with a particular interest in systematic innovations enabling the green development of low-grade mineral resources.

## Collection Editors

Prof. Dr. Jianhua Chen
Prof. Dr. Xiong Tong
Prof. Dr. Ye Chen

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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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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 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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