

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

School of Resources, Environment and Materials, Guangxi University,
Nanning 530004, China

Prof. Dr. Xiong Tong

School of Land Resource Engineering, Kunming University of Science
and Technology, Kunming 650093, China



Minerals

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.4



mdpi.com/si/246552

Minerals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
minerals@mdpi.com

[mdpi.com/journal/
minerals](https://mdpi.com/journal/minerals)





Minerals

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.4



[mdpi.com/journal/
minerals](https://mdpi.com/journal/minerals)



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

Prof. Dr. Leonid Dubrovinsky

Bayerisches Geoinstitut, University Bayreuth, D-95440 Bayreuth,
Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), GeoRef, CaPlus / SciFinder, Inspec, Astrophysics Data System, AGRIS, and other databases.

Journal Rank:

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

Rapid Publication:

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).