

Topical Collection

Ultrasound-Assisted Technologies in Mineral Processing and Metallurgy

Message from the Collection Editors

Ultrasound is a mechanical wave with a frequency exceeding 20 kHz, capable of propagating through gaseous, liquid, and solid media. In recent decades, ultrasound-assisted processing has emerged as a promising technique, leveraging the unique effects of cavitation, mechanical vibration, and localized heating to enhance mineral processing such as crushing, flotation, chemical beneficiation, and crystallization. This Topical Collection invites contributions on all aspects of ultrasound-assisted mineral processing, including but not limited to innovative ultrasound-assisted processing techniques, mechanisms of ultrasonic intensification, design and optimization of specialized ultrasound processing equipment. We believe that advances in innovative techniques, enhanced mechanisms, and specialized equipment will promote the industrial applications of the efficient ultrasound-assisted mineral processing technology in strategic mineral resource recovery. We welcome original research articles, comprehensive reviews, and short communications that advance the field.

Collection Editors

Prof. Dr. Shenxu Bao
Prof. Dr. Libo Zhang
Dr. Bo Chen



Minerals

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CiteScore 4.4



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

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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

Prof. Dr. Leonid Dubrovinsky

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

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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 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).