Topical Collection

Advanced Extraction and Recovery of Rare Earth Elements

Message from the Collection Editors

With the expansion of global rare earth exploitation, ore deposits are becoming increasingly lean, finely disseminated, and complex in composition, leading to escalating challenges in resource development. Sustained technological innovation is therefore imperative to ensure efficient recovery and utilization of rare earth resources. Advancing greener, more intelligent extraction technologies have emerged as key priorities in the evolution of rare earth resource development.

This Topical Collection presents cutting-edge research on green process innovation, intelligent equipment advancement, and cross-disciplinary technological integration in the context of rare earth resource development. The themes of the collection include, but are not limited to, the following fields:

(1) Green extraction process for ionic-type rare earth ore.

(2) High-efficiency flotation recovery of rare earth elements in mineral phases.

(3) Rare earth bio-metallurgy technology.

(4) High-efficiency extraction of rare earth elements from low-concentration lixivium.

(5) High-efficiency and short-process recovery technology of rare earth elements from secondary resources.

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Minerals

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Impact Factor 2.2
CiteScore 4.4

mdpi.com/si/263316

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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)

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).

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