Special Issue

Critical Minerals for Energy Transition: Advancing Energy Security and Sustainable Manufacturing

Message from the Guest Editors

The transition towards a low-carbon economy has placed critical minerals at the forefront of industrial innovation, accounting for a significant reduction in global greenhouse gas emissions. This Special Issue explores the interconnected supply chains of critical minerals and their impact on sustainability to ensure energy security and a sustainable environment. It addresses topics such as critical mineral extractions, conventional and new processes, recycling, material efficiency, and the integration of renewable energy such as solar and wind in the production processes. Through comprehensive analyses and interdisciplinary research, this issue seeks to uncover innovative solutions to reduce emissions and enhance the sustainability of critical metal manufacturing, while maintaining robust and secure supply chains. The Special Issue is dedicated to showcasing the latest advances, challenges, and policy perspectives in critical minerals.

Guest Editors

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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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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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