Special Issue

Modelling of Particle Behaviour during Mineral Processing

Message from the Guest Editors

The modelling particle behaviour of mineral processing can be determined using numerical or empirical simulation methods. The modelling of the operations that are used to liberate valuable minerals from bulk material for industrial applications is largely limited to empirical, data-driven models. These methods have the value of identifying challenges and determining their solutions using empirical evidence. However, they do not provide insights into the fundamental underlying mechanisms that result in the observed deficiencies or why certain solution paths succeed. For this reason, the use of modelling techniques, such as the discrete element method, computational fluid dynamics, X-ray tomography and positron emission particle tracking, has gained traction in mineral processing in recent years. This Special Issue will contain studies that focus on particle modelling by both empirical and numerical methods to provide a well-rounded overview of this important subject in the field of mineral processing.

Guest Editors

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Deadline for manuscript submissions

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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:

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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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