Special Issue

Mathematical Modelling of Mechanical Preparation and Mineral Processing Processes

Message from the Guest Editors

Dear Colleagues, Almost every aspect of our modern lives relies on minerals or mineral products. The increasing demand for metals and minerals, in conjunction with declining ore grades, leads to the conclusion that, in order to maintain their output, the mineral industry must process ever larger amounts of material and expend a remarkable amount of energy to achieve it. Simultaneously, since the needs and costs of global energy are continuously and quickly rising, mine operators and scientists are looking at different ways to optimize the performance and consumption of energy throughout the mineral extraction and beneficiation process. One of the key factors of the profitability of the mining industry is the reliable description, simulation, and control of the various operations through mathematical models. This Special Issue will highlight all the aspects related to the profitable extraction of the mined products, through the optimization of the whole range of mineral operations (the crushing, grinding, and beneficiation processes), with the support of mathematical models to effectively describe and control them.

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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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