Special Issue

GIS, AI, and Modelling of Mineralization Process and Prospectivity

Message from the Guest Editors

In the era of big data, many GIS-based methods have been ceaselessly developed in support of probing mineralization processes and prospectivity modelling, in particular for 3D modelling, spatial analysis, and high-performance numerical simulation. Additionally, our understanding of geoscience data is greatly deepened via GIS, which benefits from the development of artificial intelligence (AI) techniques, such as transfer and deep learning. This Special Issue is designed to gather reviews and papers on the applications of GIS and AI for modelling mineralization processes and prospectivity. Of particular interest are manuscripts reporting novel and key methods enlightening research on mineralization processes and/or prospectivity mapping. Studies with the aim of deciphering the metallogenesis of various ore deposits by computational analysis are also welcome.

Guest Editors

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Deadline for manuscript submissions

closed (20 March 2022)

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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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