



Automated and Quantitative Analysis of Minerals

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Message from the Guest Editors

Dear Colleagues,

Information about chemical assays is often insufficient for mineralogical studies for ore processing. Minerals define not only the value of the deposit but also the extraction and concentration methods. Quantitative analysis of minerals (modal mineralogy) has proved to be useful for the sound assessment of deposits and for finding bottlenecks in mineral processing operations. Quantitative mineralogical methods range from the simple balancing of chemical assays and conversion into modal mineralogy, quantitative powder X-ray diffraction, 2D section analysis and even 3D analysis of volume.

To obtain modal mineralogy as well as information on particles and texture, automated mineralogical methods have been extensively employed in exploration, process analysis, mineral processing, critical element analysis, quality control, environment, and metallurgy. These techniques allow the analysis of specimens in a systematic way that is normally tedious and even impossible manually. Currently, the application of automated mineralogy extends beyond SEM-based systems, and it is even used for 2D and 3D X-ray imaging, visible, and other light sources.





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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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