



Automated and Quantitative Analysis of Minerals

Guest Editors:

Dr. Mehdi Parian

Minerals and Metallurgical
Engineering, Department of Civil,
Environmental and Natural
Resources Engineering, Luleå
University of Technology, SE-971
87 Luleå, Sweden

Dr. Andrew Menzies

Bruker Nano Analytics GmbH,
12489 Berlin, Germany

Prof. Dr. Alan R. Butcher

Circular Economy Solutions Unit,
Circular Raw Materials Hub,
Geological Survey of Finland, FI-
02151 Espoo, Finland

Deadline for manuscript
submissions:

closed (28 March 2023)

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.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Leonid Dubrovinsky
Bayerisches Geoinstitut,
University Bayreuth, D-95440
Bayreuth, Germany

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), GeoRef, CaPlus / SciFinder, Inspec, Astrophysics Data System, AGRIS, and other databases.

Journal Rank: JCR - Q2 (*Geochemistry and Geophysics*) / CiteScore - Q2 (*Geology*)

Contact Us

Minerals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/minerals
minerals@mdpi.com
[X@Minerals_MDPI/](https://twitter.com/Minerals_MDPI/)