Special Issue

The Application of Automated SEM-Based Identification of Detrital, Diagenetic and Indicator Mineral Phases, Volume II

Message from the Guest Editors

Automated SEM-based instruments (e.g., MLA-SEM, QEMSCAN) provide systematic and quantitative definition of minerals in a full range of sedimentary lithologies ranging from bedrock to surficial sediments; important data for both the petroleum and mining industries. Mapped minerals can include 1) detrital phases that provide data on provenance, 2) diagenetic phases and cements that provide data on physio-chemical conditions at depositional sites, or 3) in surficial sediments, indicator (proxy) minerals derived from source-hosted mineralization. Along with mineral identification, the analyses can furnish data on mineral properties including textures, intergrowths, shapes, and sizes. The accurate, automated, and quantitative analyses of minerals provided by SEM-based mineral identification techniques essentially remove any inherent biases associated with human observation of the material. The technology fundamentally provides digital point counts of all mineral species present in material from sedimentary environments.

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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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