Special Issue

Geochemical, Isotopic, and Biotic Records of Banded Iron Formations

Message from the Guest Editors

Banded iron formations (BIFs) are layered, iron-rich, and siliceous marine chemical sediments that formed throughout the Archean and early Paleoproterozoic. Although it remains possible that direct seawater precipitation of iron silicates might have contributed to BIF formation, it is widely accepted that the ferric oxyhydroxide phase could have been the initial water column precipitate of BIFs, raising the question of the importance/potential amount of the contribution of Earth's early photosynthetic biosphere to Fe(II) oxidation. This Special Issue aims to present the latest advances on geochemical, isotopic, and biotic records and characteristics of BIFs. The combined research of the related specific fields is expected to provide important information concerning the origin of BIFs, meanwhile, enabling a better understanding of Earth's early environmental conditions and activities of the photosynthetic biosphere. This Special Issue invites submissions that include original scientific research relating to above aspects, especially those application of cutting-edge techniques, on BIFs of Archean to Paleoproterozoic ages worldwide.

Guest Editors

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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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