



High-Tech Metals Distribution in Bauxites: From the Ore Genesis to the Bayer Process Residue

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Message from the Guest Editor

Bauxite is a residual rock, consisting mainly of a mixture of aluminum hydroxides, of which industrial significance is primarily due to its profitably exploitable alumina contents. In the last few decades, bauxite ores have also been considered as a possible resource for a great number of economically-interesting elements, including some High-Tech Metals (HTM) such as REEs+Y+Sc, V, Co, Ni, Ga, Ge, and In. HTM, which are generally “co-elements”, mainly recovered as byproducts of other metallic ores, are important in a wide range of modern technologies, and their availability is generally poor relative to the current demand.

This Special Issue aims to publish papers dealing with HTM behavior in bauxites and in the residue of the Bayer process developed on bauxite ores (Red Muds). Papers providing the assessment of HTM content in bauxite ores and their residue and the evaluation of the structural bonding of HTM into the supergene ore minerals, in the perspective of the determination of the best treatment for making HTM amenable to low-cost recovery are also welcome.





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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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