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Advances in Physical Separation of Gold, Iron Ore and Rare Earth Minerals

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Message from the Guest Editors

Dear Colleagues

As is well known, physical separation has been one of the most important methods for separating different minerals based on their gravity, magnetic susceptibility, electrostatic conductivity difference, etc. Based on the liberation sizes and complex structure of target minerals, new research, applications, and control systems are required to focus on these conditions and provide a solution for the enrichment of minerals by physical methods.

In this regard, the challenges are not only about the aforementioned reasons but also include the usage of water, energy, and costs of the grinding conditions which need to be adjusted for obtaining suitable particle sizes and liberation. Thus, considering those factors, new researchers by means of theoretical to lab-scale and even plant-scale applications will provide solutions developed by the mineral processing community.

The purpose of this Special Issue is to focus on the latest ideas, new methods, processes, and information in the production of gold, iron ore, and rare earth elements from a variety of sources using physical enrichment methods.

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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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