Special Issue

Iron Ore Flotation

Message from the Guest Editors

Iron ore flotation is a key technique to concentrate intermediate-low-grade ore, in order to reach the market requirements for higher-grade concentrates of iron. The presence of some impurities in addition to quartz in iron ore, aluminium silicates, and minerals containing phosphorus impair productivity in the steel industry and have an impact on iron ore concentrate value. The flotation method most commonly applied is the one that is based on cationic flotation of silica and silicates (reverse flotation), and which is preceded by desliming. As the complexity of mineralogy grows, in terms of extremely fine mineral liberation and very complex intergrowths, a number of signifcant issues come into view. Thus, there is a crucial need for research designed to make the iron ore mining industry more sustainable. This Special Issue will focus on recent advances in iron ore flotation, including but not limited to topics such as fundamental reagent, flotation chemistry, bubbles, froths, bubble–particle interactions, flotation applications, and plant practice.

Guest Editors

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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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