Special Issue

An Overview of Applications and Types of Flotation Reagents: Performance, Efficiency and Optimization

Message from the Guest Editors

Flotation is a pivotal process in mineral processing, allowing for the concentration of valuable minerals from ores. Flotation reagents, encompassing collectors, frothers, modifiers and dispersants, enable the selective collection of valuable mineral particles via air bubbles, separating them from gangue minerals. The effectiveness of these reagents significantly impacts the metallurgical efficiency (grade–recovery curve). Optimization strategies consider factors such as reagent dosage, water quality, particle size and ore mineralogy to achieve desired outcomes. This abstract underscores the significance of efficient flotation reagents in mineral processing, especially for separating minerals in complex ores. This Special Issue in the *Minerals* journal showcases the latest advancements and innovations in flotation reagents, encompassing both improved performance and a commitment to sustainability within the mining industry.

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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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