Special Issue

Surface Chemistry and Reagents in Flotation

Message from the Guest Editor

In the intricate field of mineral processing, where science meets artistry in unlocking the riches hidden within ore bodies, froth flotation emerges as an exciting process. Controlled by sensitive interactions between molecular forces and tailored chemical formulations, surface chemistry orchestrates the delicate interplay between solid particles, air bubbles, and liquid chemistry, guiding them to harmonize in the flotation process towards optimal separation and purification. Froth flotation is a fascinating application of surface chemistry and interfacial phenomena in which flotation reagents play a vital role in improving the separation efficiency. Due to its technical versatility and cost-effectiveness, froth flotation is extensively used in the mining industry to meet the rapid growth in demand for minerals and metals. The flotation process depends heavily on surface chemistry, which can be controlled by various chemical reagents classified as collectors, depressants, frothers, promoters, modifiers, and pH regulators.

Guest Editor

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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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