Special Issue

Interactions of Chemical Reagents with Clay Minerals

Message from the Guest Editor

The presence of complex gangue like phyllosilicates is increasingly challenging for the mining industry. Clays negatively impact the different stages of mineral processing, including leaching, froth flotation, comminution, solid-liquid separation, tailings handling and storage. Generally, clays are associated with lower recovery of valuable minerals in flotation and contamination of their concentrate, reduction of the permeability of heap leachings, increase of rheological properties of slurries, low settling rates in thickening operations, etc. Each of these stages involves specific chemical reagents that largely determine the efficiency of the processes, and are decisive in economic, environmental and social matters. In this special issue, we are interested in improving the understanding of the interactions between the surface of clays with the various chemical reagents that are applied in the mining industry, including collectors, frothers, pH modifiers, polyelectrolytes, coagulants, rheological modifiers, dispersants, surfactants, etc.

Guest Editor

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About the Journal

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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