Special Issue

Harnessing Surface Chemistry for Enhanced Mineral Recovery

Message from the Guest Editors

Mineral processing plays a vital role in extracting valuable minerals from ores and makes an important contribution to a variety of industries. Surface chemistry controls the interaction between minerals and the flotation reagents and is crucial in determining the efficiency of mineral recovery. Changing the surface chemistry properties of minerals involves the introduction of new flotation reagents and surfactants, the use of surface modification technology to improve the flotation performance of minerals, and the exploration of interface phenomena. Using surface chemistry to improve mineral recovery means more efficient resource use and more sustainable mineral exploitation. Through the in-depth study of the surface chemistry properties of minerals, it is possible to improve mineral recovery, reduce production costs, and reduce environmental pollution and resource waste. Therefore, it is of great theoretical and practical significance to explore the application potential of surface chemistry in mineral processing engineering. This Special Issue explores the latest advances and innovations in the use of surface chemistry to improve mineral recovery processes.

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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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