Special Issue

Recent Advances and Opportunities in the Bioleaching and Chemical Leaching for Metal Recovery from Industrial Waste Streams

Message from the Guest Editors

Declining ore grades and limited availabilities of economically important metals and critical raw materials in combination with increasing consumption of metal and mineral resources have already caused shortages of these materials. Secondary resources are, therefore, very important as potential sinks for valuable raw materials, which can be recovered and re-introduced into production cycles. Industrial mining, manufacturing, processing, and construction in areas such as metallurgy, energy production, electronics, waste incineration, and landfilling generate waste solid and liquid streams including disposable sludges, ash, and slags, which may contain recoverable metals. Some metal-containing waste from industrial processes may, however, have little or no treatment option or beneficial application without considerable economic input, but the benefits of waste detoxification and environmental health may help justify the recovery and sustainability. A potential threat to the environment is a consequence of limited storage options in the absence of economically justifiable solid waste treatment processes.

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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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