Special Issue

Jarosites: Structure, Formation, Leaching, Environmental, Applications

Message from the Guest Editors

Jarosites are used to control the content of iron, sulfates, alkalis and other metals in hydrometallurgical circuits. However, jarosite-type compounds, resulting from the oxidation of mineral sulfides, are also related to the recovery of noble metals that contain or are associated with them. An important application of jarosite-, beudantite- or alunite-type materials has been in the prevention of the environmental impact of different elements, such as arsenic or lead, contained in soils, in water or in different hydrometallurgical processes. On the other hand, studies by different authors have shown that jarosites can play an important role in the inhibition of copper minerals during some leaching process with or without the presence of bacteria (bioleaching processes). Finally, due to their characteristics, jarositic materials can find applications in pigments, fillers, catalytic materials, etc. The Special Issue aims to include articles on both fundamental issues related to jarosites: structure, formation, thermodynamics, kinetics, and on applied issues that include laboratory information but also the application of industrial plants.

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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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