Special Issue

Recycling and Reuse of Metallurgical By-Products

Message from the Guest Editor

Today, with the rapid increase in metals' demand and production capacity, a large amount of by-products, such as smelting flue dust, smelting slag, leaching residue, etc., are generated during the pyrometallurgical and hydrometallurgical process. These by-products usually contain toxic heavy metals and are placing a heavy burden on the metallurgical industry. If not properly handled, they will cause recontamination of the surrounding atmosphere, soil, and groundwater and pose a greater risk to human health. However, at the same time, they offer abundant resources, including value metals and precious metals. Therefore, the recycling and reuse of metallurgical by-products is regarded as the achievable response measure for both environmental protection and resource sustainable development. This Special Issue is focused on the regulations and technologies of MBP recycling, including in-depth characterization, environmental impact, metals recovery, safe disposal, production of high-added value products, and other field applications. We welcome articles that contribute to novel recycling systems and advanced recycling techniques which will be more environmentally friendly.

Guest Editor

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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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