



Metal Recovery and Separation from Wastes

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Deadline for manuscript submissions:
closed (20 January 2023)

Message from the Guest Editors

Dear Colleagues,

Slag is a by-product from the pyrometallurgical processing of various ores. A large amount of slag, on the order of hundreds of millions of tons, is produced annually worldwide. Each type of slag contains specific elements such as Cr, V, Cu, Pb and Zn, which are valuable resources and are also harmful to the environment. Currently, problems regarding the environment have increasingly attracted great attention as the global interest in these issues increases. If metals in slags are not recovered effectively, it will not only waste resources but also seriously pollute the environment.

The current processes for recovering metals (V, Cr, Ti, Fe, Mn, Pb, Zn, Cu, Ni, Co, Al, As, Nb, Mg, Au, etc.) from slags (steel slag, copper slag, ferrochrome slag, lead slag, vanadium slag, ferronickel slag, furnace slag, ferroalloy slag, silic-manganese slag, etc.) include gravimetric, magnetic, floatation, pyrometallurgical, hydrometallurgical, bioleaching, chlorination and electrolysis methods, etc.

To minimize production costs and environmental impacts, it will be more and more necessary to use cleaner and more economical methods to recover metals from slags.





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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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