

Special Issue

Green Solvent Extraction for Critical Metal Recovery

Message from the Guest Editors

The search for new critical raw material sources has increased pressure to improve extraction efficiency whilst adhering to sustainable mining demands. As a result, more scientific advances are required to meet technical, economical, and sustainable goals. In this Special Issue, we seek studies that explore scientific developments using green reagents in all steps of the critical raw material extraction process. Topics of interest include, but are not limited to, the following:

- Acid leaching using organic acids from primary and secondary sources;
- The development of new extractants for separation by solvent extraction;
- Materials for the membrane-based separation of metals;
- Applications in the physical separation of ores and e-waste, such as flotation;
- Technical economic analysis and lifecycle assessment.

Keywords: critical raw materials; metals; electronic waste; battery metals; low-grade resources; metallurgical waste; pyrometallurgy; hydrometallurgy; recycling; energy transition; separation process; electro dialysis; reverse osmosis

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About the Journal

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.

Editors-in-Chief

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