Special Issue

Solvent Extraction and Metal Recovery

Message from the Guest Editor

Solvent extraction (SX), known as liquid–liquid extraction, is widely used to separate and concentrate metallic ions from aqueous solution in a broad field of industries. SX is a well-established technique employed in hydrometallurgical processing of many metals. The simplicity, speed, selectivity, cost-effective and wide scope make SX the favored separation technique for metal recovery from aqueous waste streams. There is a large number of available extractants to selectively extract the desired metals. Ionic liquids also provide new prospects to process low-grade metal ores and to recycle metal ions. Some modern and rapid methods have emerged to reduce solvent, time and energy consumption for maximizing the metal recovery. This Special Issue is focused on solvent extraction of a particular metal ion or group of ions from various leach solutions or industrial waste waters, leaving behind the unwanted ions. Reviews and original articles in the areas of SX principle, extractant selection, extraction process optimization, as well as industrial applications, are welcomed.

Guest Editor

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Deadline for manuscript submissions

closed (28 February 2022)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/96559

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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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