Special Issue

Research Progress on the Extractive Metallurgy

Message from the Guest Editors

In metals technology, the extractive metallurgy, as a metallurgical stage, ensures the required chemical conditions for advanced products. During extractive metallurgy, high- and low-temperature units are used for smelting, leaching, electrowinning, treating and casting of metals. Extractive metallurgy is characterised by thermodynamic and kinetic relationships between all components. Therefore, investigations on interactions of hetero-phases system are essential and fundamental. Heterogeneous systems cover solid, liquid and gaseous components such as metal alloys, slags, bubbles, refractories, nonmetallic inclusions and electrodes. The flow of liquid metal or solvent in the metallurgical units create a varied hydrodynamic structure and a varied mass transport rate between liquid–solid–gas phases. Moreover, concentrations of local elements create no equilibrium of thermodynamic states. Hence, knowledge on phenomena occurring during extractive metallurgy is fundamental for a deeper insight to the nature of metals technology.

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Deadline for manuscript submissions

closed (20 August 2022)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/80370

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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