



Research Progress on the Extractive Metallurgy

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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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