

Special Issue

Liquid Steel Alloying Process

Message from the Guest Editors

In steel technology, the secondary metallurgy, as a metallurgical stage, ensures a required chemical and thermal conditions for advanced steel grades. During secondary metallurgy, the units with vacuum treatment (RH, VD) or without vacuum treatment (LF, CAS-OB) are used for the alloying process. During secondary metallurgy, some elements such as Al, B, Ba, Ca, Co, Cr, Cu, Mn, Mo, Nb, Ni, Si, S, V, and W are fed to liquid steel. Therefore, investigations on thermodynamic and hydrodynamic interactions of the hetero-phases system are essential. The heterogeneous system covers steel, alloy, slag, bubbles, and refractory and nonmetallic inclusions. The flow of liquid steel in the metallurgical units create a variable hydrodynamic structure and mass transport rate between liquid–solid–gas phases. Moreover, local elements concentrations create no equilibrium thermodynamic states. Hence, knowledge on this phenomenon occurring during the treatment of liquid steel is fundamental for the proper activity of the primary and secondary cooling zone in continuous casting technology.

Guest Editors

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Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

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