Special Issue

Influence of Segregation on Phase Formation in Metallic Alloys

Message from the Guest Editors

This Special Issue is dedicated to the phenomenon of segregation that occurs in metallic alloys and with the subsequent formation and/or transformation of different phases. The heterogeneity of the chemical composition has a great influence on the formation of different phases. For example, in steels, segregation of elements like carbon, nitrogen and sulphur promotes the formation of manganese sulphides, titanium nitrides and chromium carbides that influence the machinability, impact toughness and corrosion resistance in steels. The segregation of major alloying elements like Si in aluminium alloys and trace elements like phosphorous in steel is important and can have a major impact on the material properties. The influence of different processes like casting speeds, inoculants, hot working, electroslag remelting (ESR) and vacuum arc remelting (VAR) on phase formation will also be discussed. This Special Issue is dedicated to such problems in various alloys, mainly in iron (steel) and aluminium-based systems.

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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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