



Influence of Segregation on Phase Formation in Metallic Alloys

Guest Editors:

Dr. Jaka Burja

Institute of Metals and
Technology, Lepi pot 11, SI-1000
Ljubljana, Slovenia

Dr. Jožef Medved

Faculty for Natural Sciences and
Technology, Aškerčeva cesta 11,
1000 Ljubljana, Slovenia

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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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Editor-in-Chief

Prof. Dr. Alessandra Toncelli

Department of Physics, University of Pisa, 56126 Pisa, Italy

Message from the Editor-in-Chief

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Crystals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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