

Special Issue

Modelling of Recrystallisation in Metallic Materials

Message from the Guest Editor

The control of grain size and properties in metallic materials through thermomechanical processing is central to many industrial processes and, thus, the subject of much theoretical and practical work. The ability to accurately predict the recrystallisation behavior for current grades and processes in a timely manner is a key objective, as is the extension of that to the design of improved (based on a wide range of criteria) alloys and process routes. Improvements in modelling techniques and data analysis have increased the range of material parameters that can be modelled, while the effects of increasing numbers of process parameters can be accommodated. These predictions, however, require validation, and so, modelling improvements need to be backed up with improved characterisation (e.g., 3D imaging, grain distributions rather than just mean values), while industrial implementation needs to have sufficient process control and monitoring. This Special Issue therefore aims to bring together, in one volume, the latest modelling approaches and validation results for this key metallurgical process.

Guest Editor

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About the Journal

Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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