



## Microstructure and Defect Simulation during Solidification of Alloys

Guest Editor:

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Deadline for manuscript  
submissions:

**31 January 2025**

### Message from the Guest Editor

The solidification theory has advanced extensively in the past few centuries, offering an extraordinary guide for the optimization of material properties. Numerical simulation, which provides a better establishment of microstructure–processing–properties relationships, is attracting increasing attention in academia and industry. Computational approaches allow more accurate and detailed models (such as phase-field method, cellular automaton, and level set) to be constructed, shedding light on many solidification phenomena. The successful identification of solidification behavior and thermodynamic principles further promotes the development of simulation techniques in predicting microstructure and defects, which enriches the design and optimization of alloys and provides guidance for the improvement of material properties.

This Special Issue aims to review recent progress and new developments in microstructure and defect simulation during solidification. Review articles which describe the current state of the art are also welcome.





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## Message from the Editor-in-Chief

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