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Structure and Properties of Grain Boundaries in Crystalline Materials

Guest Editor:

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Deadline for manuscript submissions:

closed (30 June 2020)

Message from the Guest Editor

Most properties of crystalline materials in high-technology applications are affected by the presence of grain boundaries. Grain boundaries determine many important properties (e.g., electrical, mechanical, nuclear and corrosion resistance) of crystalline materials.

In this special issue, we invite original research articles and review papers on the following topics.

Potential topics include, but are not limited to:

- Grain boundary structure in crystalline materials (bicrystals, polycrystals, and nanocrystals)
- Grain boundary structural transitions
- Grain boundary properties (electrical, nuclear, mechanical, corrosion properties)
- Grain boundary kinetics
- Grain growth
- Grain boundary migration
- Microscopic characterization of grain boundary structure and migration by various methods, such as electron microscopy (TEM and SEM), field ion microscopy (FIM), atomic force microscopy (AFM), and scanning tunneling microscopy (STM)
- Spectroscopic characterization by various methods, such as electron energy loss spectroscopy (EELS)





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Message from the Editor-in-Chief

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