



Processing-Microstructure-Properties Relationship of Advanced Alloys

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Message from the Guest Editors

The processing–microstructure–properties relationship of alloys defines their feasibility and applicability. Understanding the fundamentals of these relationships allows for the predictability of materials performance and a more efficient design for integrated structures.

The aim of this Special Issue “Processing–Microstructure–Properties Relationship of Advanced Alloys” of *Crystals* is to present recent findings on the following topics:

- Advanced alloys (high-entropy alloys, advanced high-strength steels, heterostructured materials, etc.);
- Novel or extreme processing (additive manufacturing, severe plastic deformation, etc.);
- Cutting-edge characterization techniques (in situ neutron/synchrotron diffraction, testing under extreme environments, shock-loading, etc.);
- Multidisciplinary alloys with improved mechanical properties;
- Strengthening and deformation mechanisms of advanced alloys;
- Simulations for processing–microstructure–properties relationship of alloys along with the experimental evidence.

Submissions of full papers, review articles, and communications are welcome.

Special Issue



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Message from the Editor-in-Chief

Crystals are a very important class of structured material, both from a scientific and technological viewpoint. In 2011, the Nobel Prize in Chemistry was awarded to Dan Schechtman for his work on quasicrystals. Our journal already expresses in its name *Crystals* that its focus centers around all aspects of this class of materials, which has fascinated humankind from its beginning. Despite decades of research on crystals, it remains a hot and fascinating research topic.

Crystals is a good platform for dissemination of knowledge in this area.

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