Special Issue

Structure and Properties of Grain Boundaries in Crystalline Materials

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)

Guest Editor

Prof. Dr. Sung Bo Lee

Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University, Seoul 08826, Republic of Korea

Deadline for manuscript submissions

closed (30 June 2020)

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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