Special Issue

Finite Element Modeling of Solid State Phenomena in Metals and Alloys

Message from the Guest Editor

The mechanical and functional properties of metals are strongly related to their microstructures, which are themselves inherited from thermal and mechanical processing. A precise numerical modeling of metallic materials is then a topic of prime importance largely due to the interest in the predictive simulation of materials behavior in order to reduce the difficulty of developing new materials and thanks to the academic interest of this strategy in order to improve our understanding of metallurgical phenomena. In the last several decades, numerous numerical methods have been developed at the mesoscopic scale to model solid-state phenomena taking place during metal forming under the concept of digital materials.

- finite element modeling
- metallic materials
- solid-state phenomena
- digital materials
- mesoscopic scale

Guest Editor

Prof. Dr. Marc Bernacki

CEMEF - MINES ParisTech, 06904 Sophia Antipolis, France

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

mdpi.com/journal/materials

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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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