Dynamic Recrystallization Behavior of Metallic Materials

Message from the Guest Editor

Dear Colleagues,

This Special Issue of Metals deals with all aspects of the dynamic recrystallization of metals and alloys. The topic is not new, but still represents a very active research area, due to the complex multiscale nature of the problem, and its industrial importance.

A better understanding of dynamic recrystallization phenomena implies the use of predictive models at different scales, which describe the complex evolutions of interface patterns, looking at the local kinetic equations, and at the global meso- or macroscopic resulting properties. Experimental approaches also explore the dynamics of interfaces at different scales, looking at nucleation phenomena, texture changes, interaction between moving boundaries and dislocations structures, boundary mobility and energy, coupling with twinning, phase transformation and precipitation. At the laboratory scale, the possibility to explore dynamic recrystallization in macroscopic samples from the measurement of temperature, stress/strain, strain rate, geometry or resistivity changes, deserves further investigation.

mdpi.com/si/10358

Special Issue
Editor-in-Chief

Prof. Dr. Hugo F. Lopez
Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Message from the Editor-in-Chief

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High visibility: indexed by the Science Citation Index Expanded (Web of Science) and other databases.

Rapid publication: manuscripts are peer-reviewed and a first decision provided to authors approximately 12.6 days after submission; acceptance to publication is undertaken in 3.3 days (median values for papers published in this journal in the first half of 2019).

Contact Us

Metals
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland
Tel: +41 61 683 77 34
Fax: +41 61 302 89 18
www.mdpi.com
mdpi.com/journal/metals
metals@mdpi.com
@Metals_MDPI