

Special Issue

News Trends in Powder Metallurgy: Microstructures, Properties, Durability

Message from the Guest Editors

Elaboration of sintered metallic alloys is currently one of the main ways of developing structural parts, compared to traditional methods of casting or plastic deformation processes. In this Special Issue, we propose a review of the scientific advances in this field, covering all the areas concerned, especially (though non-exhaustively):

- Powder properties, nanostructuration, mechanical alloying, and aging;
- Additive manufacturing by powder bed melting processes;
- Mechanical properties: fatigue, creep, plasticity mechanisms;
- Physical properties: magnetism, electrical conduction;
- Damage, fracture, effect of the environment: oxidation, electrochemical corrosion.

This Special Issue seeks to provide a selection of original research on the impact of the microstructure on the mechanical and functional properties of metallic alloys obtained by sintering and additive manufacturing routes. Submissions dealing with new microstructures and specific properties of metal powders are also welcome. As of this Special Issue, we invite you to submit your work, which will be peer-reviewed, to be accepted for publication in *Metals*.

Guest Editors

Prof. Dr. Eric Hug

CRISMAT Laboratory, UMR 6508, Normandy University, 6 Boulevard Marechal Juin, CEDEX 4, 14050 Caen, France

Prof. Dr. Guy Dirras

LSPM laboratory, CNRS-UPR 3407, Université Paris 13, 99 avenue Jean Baptiste Clément, 93430, Villetaneuse, France

Deadline for manuscript submissions

closed (1 May 2021)



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

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About the Journal

Message from the Editorial Board

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.

Editors-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

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).