

Special Issue

Spark Plasma Sintering-A Key Technology towards the Development of New Materials

Message from the Guest Editor

Spark Plasma Sintering (SPS) and field-assisted consolidation technologies are representing a great opportunity for the production of new materials. Nevertheless, the challenge to achieve properties that cannot be obtained by other conventional methods is strictly related to know-how of this fast sintering process, which permits the production of near full dense materials, using lower temperatures and shorter time. The combination of SPS with severe plastic deformation processes like mechanical milling has been proved to be a suitable route for the development of nano- and ultrafine grained materials. Mechanical alloying with ceramic reinforcement has extended the benefits of SPS to the fabrication of composite materials. Moreover, SPS has also been successfully used for the development of functionally graded materials (FGM) and materials for many other applications. Aim of this Special Issue is to collect papers about SPS and field-assisted consolidation technologies of metals, alloys, and composite materials.

Guest Editor

Prof. Dr. Massimo Pellizzari

Department of Industrial Engineering, University of Trento, 38123 Trento, Italy

Deadline for manuscript submissions

closed (1 December 2018)



Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/9671

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

[mdpi.com/journal/
metals](https://mdpi.com/journal/metals)





Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



[mdpi.com/journal/
metals](https://mdpi.com/journal/metals)



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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /
CiteScore - Q1 (Metals and Alloys)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.8 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2024).