Special Issue

Powder Metallurgy of Biodegradable Metals for Medical Applications

Message from the Guest Editor

There is an increasing interest in the use of biodegradable metals in various medical applications. The driving force of this interest is the need for biomedical devices able to be metabolized by the human body once they have fulfilled a specific task. The requirements for a metal to comply with this desired behavior are strict. Among the metals able to degrade under physiological conditions, magnesium, iron, and zinc attract special interest given their roles as essential nutrients in the human body. Powder metallurgy (PM) technologies are innovative for the production of biomedical implants, Which enable the production of near-net-shaped components with complex geometries from powders with little loss of material. This Special Issue seeks to provide an overview regarding the powder metallurgy of Mg, Fe, and Zn biodegradable metals and alloys for the manufacture of biomedical implants. We welcome articles on powder synthesis, powder compaction, powder sintering, hot isostatic pressing, colloidal processing, spark plasma sintering, powder injection molding, and additive manufacturing techniques such as selective laser melting or electron beam melting.

Guest Editor

Dr. Sandra Carolina Cifuentes Cuéllar

Department of Applied Mathematics, Materials Science and Engineering and Electronic Technology, ESCET, Universidad Rey Juan Carlos, Madrid, Spain

Deadline for manuscript submissions

closed (15 September 2022)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/41423

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

mdpi.com/journal/metals

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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.

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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

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