Special Issue

Advances and Applications of Nickel-Titanium Alloys in Medical Fields

Message from the Guest Editor

Since the observation of shape memory characteristics in an almost equiatomic nickel-titanium (NiTi) alloy in research developed for the United States of America Navy, NiTi alloys have been employed not only in ocean engineering but also in medical fields, with applications in orthopedics, orthodontics, and endodontics. The almost equiatomic proportion of the main two elements leads to a weight proportion of around 56% nickel and 44% titanium. As with other metallic alloys, the NiTi alloy can exist in several crystallographic arrangements. The changes in the alloy arrangement may result from stress application or temperature effects. Due to their characteristics, NiTi alloys have been recurrently used in the manufacture of medical tools and instruments. This Special Issue intends to provide an overview of the latest advances, tendencies, and applications of this alloy in multiple areas of different medical fields. It is my pleasure to invite you to contribute to this Special Issue, where both research papers and reviews, with a focus on the following potential topics, are welcome.

Guest Editor

Prof. Dr. Jorge Nuno do Martins
School of Dental Medicine, University of Lisbon, 1600-277 Lisbon, Portugal

Deadline for manuscript submissions

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

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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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