

Special Issue

Processing and Treatment of Hexagonal Metallic Materials

Message from the Guest Editor

Materials with hexagonal closed packed structure (HCP) play an important role in various fields of our life. For example, zirconium or its alloys are used in nuclear industry; titanium-based materials are widely used in aerospace and aircraft industry, but also in medicine for the fabrication of various types of implants. Magnesium- and zinc-based materials are being studied as candidates for the fabrication of biodegradable implants and more. Because high and very specific demands are placed on the materials for those applications, the properties of the materials need to be enhanced in some cases. Potential topics for this Special Issue, entitled “Processing and Treatment of Hexagonal Metallic Materials” include but are not limited to the following:

- Treatment of Ti-, Mg-, or Zn-based biomaterials
- Influence of thermal treatment on mechanical and corrosion properties
- Influence of working (extrusion, ECAP, rolling, etc.) on microstructural, mechanical, or corrosion characteristics
- Additive manufacturing of HCP metals
- Surface treatment of HCP metals – influence on tribological, corrosion and biological properties

Guest Editor

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Deadline for manuscript submissions

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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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