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Mechanical and Microstructural Characterisations of Nickel Based Superalloys

Guest Editor:

Prof. Dr. Soran Birosca
School of Mechanical and Design Engineering, University of Portsmouth, Hampshire, PO1 2ST, UK

Deadline for manuscript submissions:
closed (20 July 2019)

Message from the Guest Editor

In this Special Issue of *Metals*, an open access forum is provided for publishing original papers that investigate the correlations between thermomechanical processing parameters and generated microstructure to understand the physical and mechanical properties of nickel-based superalloys. The following aspects of the science and engineering of nickel-based superalloys are of particular interest:

- Original research studies that relate to the understanding of mechanical properties of nickel based superalloys obtained following specific processing/heat treatment route (experimental, theoretical, and simulation modeling).
- Understanding the mechanisms involved in microstructure evolution and phase transformation during processing of nickel based superalloys, specifically as they relate to the understanding of final mechanical properties.
- Nano/micro/macro structure characterization and chemistry of nickel based superalloys used in power generation, nuclear, aerospace, and other critical applications.
- Micro/macro texture devolvement during thermo-mechanical processing of nickel based superalloys.

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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

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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Contact Us

Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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mdpi.com/journal/metals
metals@mdpi.com
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