



Frontiers in Nanostructured Metals and Alloys

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Deadline for manuscript
submissions:

closed (30 June 2019)

Message from the Guest Editor

Despite decades of research, nanostructured metals and alloys are still providing new and unique properties to serve in ever more diverse applications. The understanding of and ability to control microstructural development during processing has led to many exciting reports of superior strength and improved ductility, enhanced thermal stability, tunable corrosion properties, and many other important advancements. This Special Issue will feature recent developments and unique applications including the following topics:

- New and atypical applications, such as catalysis, sensing, energy generation and storage, etc.
- Microstructural tuning of metals and alloys, including inhomogeneous distributions of grain size (gradient, bimodal, etc.) and phase formation and separation, in order to achieve multi-phase alloys and composites during processing (mechanical alloying, deposition, surface attrition, heating/cooling cycles, etc.).
- New processing strategies to increase throughput and achieve unique control of microstructure (new surfactants, multi-step processing to create unique microstructures, methods to scale production and reduce cost, new powder consolidation strategies, etc.).





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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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Journal Rank: JCR - Q2 (*Metallurgy & Metallurgical Engineering*) / CiteScore - Q1 (*Metals and Alloys*)

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