



Advances in Low-Temperature Nitriding and Carburizing of Stainless Steels and Metallic Materials: Formation and Properties—2nd Edition

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Message from the Guest Editors

Dear Colleagues,

The formation of an expanded austenite phase via low-temperature nitriding and carburizing of stainless steels was developed nearly 40 years ago. Initially, this method was applied to austenitic stainless steels, but the discovery has extended to all stainless steel grades. In recent years, this method has been combined with new processes, including thermal spray coating, and is expected to contribute to the manufacturing of next-generation materials.

This Special Issue on “Advances in Low-Temperature Nitriding and Carburizing of Stainless Steels and Metallic Materials: Formation and Properties—2nd Edition” intends to cover original research and critical review articles on recent advances in all aspects of low-temperature nitriding and carburizing.

In particular, the topics of interest include, but are not limited to, the following:

- Fundamentals and new concepts;
- Material properties and metallurgical characterization;
- Applications to novel stainless steel and metallic material alloys;
- Combination with other manufacturing processes;
- Industrial applications.

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Special Issue



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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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