# Special Issue

# Advances and Trends in Processing of Al-Based Alloys Using Plastic Deformation

## Message from the Guest Editors

Plastic deformation is an essential process that has been significantly developed and used in Al-based alloys produced by casting or powder metallurgy over the years to improve their properties. It offers varied techniques that enable the manufacturing of complex shapes, improve performance, and drive advances in diverse applications, ranging from the aerospace to the automotive industries. Thus, this Special Issue addresses the effects of various techniques such as forging, extrusion, drawing, rolling, and severe plastic deformation, among many others, on the hardening mechanisms and the resulting mechanical and microstructural properties of Al-based alloys, without neglecting the synergy with heat treatments such as aging and sintering, which further optimize alloy behavior. All of this is carried out while seeking to generate new knowledge that enables development and innovation in these alloys, as well as the design of new forming process routes, which is an essential requirement of new materials.

- plastic deformation
- Al-based alloys
- plastic deformation techniques
- mechanical properties
- microstructural properties

## Guest Editors

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## Deadline for manuscript submissions

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# About the Journal

## Message from the Editor-in-Chief

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.

## Editor-in-Chief

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