Special Issue

Challenges for Implementation of Magnesium into More Applications

Message from the Guest Editors

We are excited to announce a call for research articles for a Special Issue focused on “Challenges for Implementation of Magnesium into More Applications”. In the biomaterials sector, magnesium alloys present a promising material as bioresorbable implants. A key challenge is controlling the degradation rate in physiological environments to ensure structural integrity during healing. Localized corrosion, gas formation, and the biocompatibility of corrosion products remain active areas of research. Although very attractive in the automotive industry, some challenges include galvanic corrosion, joining techniques, and high costs. For aircraft and aerospace applications, magnesium alloys provide exceptional weight-saving potential. On the other side, economic feasibility is often application-specific and must be evaluated against performance and lifecycle cost metrics. To ensure our knowledge remains current and relevant across these sectors, we would very much appreciate the inclusion of recent findings, case studies, or data concerning the technical, economic, or legal challenges of magnesium alloy adoption in any of the mentioned fields.

Guest Editors

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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.

Editors-in-Chief

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