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Development and Applications of New Lightweighting Metal Technologies: High Strength Al and Mg Alloys

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

As the concerns on global warming as a result of CO₂ emission are increasing, vehicle lightweighting through new structural materials has become more and more important. As a result, this Special Issue is focused on the development and applications of new lightweighting metal technologies with special attention given to high strength Al and Mg alloys.

Articles concerning high strength aluminum alloys, allovs. and their processing magnesium and characterizations are welcome. This is an excellent opportunity for metallic materials scientists and engineers all over the world to get their latest work published on all aspects of the physical and mechanical metallurgy of lightweight alloys as well as processing technologies. Any non-constructive testing such as computed new tomography and process optimization such as multiscale modeling for evaluating the properties and aluminum and magnesium alloys for end applications, in automotive, aerospace, and marine fields are welcome.









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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 metallurgical field the 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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