Special Issue

Casting and Forming of Advanced Aluminum Alloys

Message from the Guest Editor

The automotive and aeronautical industry´s response to the environmental impact provoked by gas emissions and consumer expectations has driven aluminum alloy casting changes during recent years. Light weighting and downsizing have led to the production of smaller and more efficient aluminum alloy casting components with the same or improved mechanical properties, helping in fuel economy and gas emissions. Thus, publications covering significant research developments by either computer simulation of casting process or advanced melt treatment techniques, aluminum alloy forming process, advanced methods for pouring aluminum alloy, as well as on the fundamentals of solidification, mechanical behavior, and microstructural development in aluminum alloy are encouraged to be submitted for publishing. Furthermore, the metal forming process as micro casting based on the well-known lost-wax-lost-mold technology of investment casting can be considered. It is expected that through such activities, any gap that might exist between conventional aluminum alloy processing and advanced processing techniques will be effectively reduced or eliminated.

Guest Editor

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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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