

Special Issue

Medium-Mn Steels, a Promising Type of the 3rd Generation Steels

Message from the Guest Editor

Medium-Mn steels containing 3%–11% Mn have reached much attention lately. Excellent properties of medium-Mn steels were invented and reported already in the early 1970s, but the interest has recently exploded with respect, particularly, to automotive applications.

Medium-Mn high-strength and ultra-high strength steels was developed in order to enable lightweight car body design and improved passenger safety features. However, the optimization of medium-Mn steel has not been fully addressed due to the complexity of their mechanical properties, which are sensitively dependent on their chemical composition and processing conditions. Despite the apparent success in achieving the desired base metal mechanical properties, very few studies have been performed on the effects of fabrication processes. The exploitation of medium-Mn steels is far from mature and the subject is both scientifically and technologically fascinating. In order to provide an overview on the current state-of-the-art of these advanced steels, a Special Issue of *Metals* is commissioned and we invite contributions covering different aspects of medium-Mn steels.

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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