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Current Trends in Steels: High Mn Steels for Cryogenic Applications

Guest Editor:

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Deadline for manuscript submissions:
closed (30 November 2022)

Message from the Guest Editor

Dear Colleagues,

Metals is launching a new Special Issue entitled "Current Trends in Steels: High Mn Steels for Cryogenic Applications." The Special Issue will provide a platform for presenting the latest experimental and theoretical results in the innovative field of high-Mn austenitic steels for cryogenic applications, such as liquefied natural gas, liquid hydrogen and liquid helium fields. The Special Issue covers strengthening mechanism, cryogenic toughening mechanism, hydrogen embrittlement susceptibility, low-cycle fatigue properties, deformation mechanisms at low temperatures (77 or 4.2 K), and other unusual "structure – properties" behaviors. We especially appreciate innovative studies in overcoming the strength (room temperature)–cryogenic impact toughness (77 or 4.2 K) trade-off.

I would be delighted if you would be willing to contribute an original or review article to this Special Issue.

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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 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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