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Manganese-based Permanent Magnets

Guest Editor:

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Deadline for manuscript submissions:
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Message from the Guest Editor

Dear Colleagues,

There is a significant gap between the energy product, BH_{max}, of both the traditional ferrite and AlNiCo permanent magnets of less than 10 MGOe and that of the rare earth magnets of greater than 30 MGOe. This is a gap that Mn-based magnets could potentially fill inexpensively. This special issue presents work on the development of both MnAl and MnBi permanent magnets. Some of the challenges involved in the development of these magnets include improving the compounds' energy product, increasing the thermal stability of these metastable compounds, and producing them in quantity as a bulk material. These challenges are addressed from both experimental and theoretical points of view in the papers presented here.

Prof. Dr. Ian Baker
*Guest Editor*s

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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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