

Special Issue

Nano-Structured Magnetic Materials

Message from the Guest Editor

As dimensions are reduced to the nanoscale, the properties of magnets can be tuned by controlling the shapes and phases of crystalline materials. The magnetization and magnetic anisotropy are functions of morphology and strain, and nanostructuring materials offers ways to control these properties. In addition, composite hard/soft materials can be created where magnetic coupling at interfaces mediates the exchange interactions. Modern computational methods can be applied to predict and model the fundamental properties of designer materials. However, sound experimental approaches must be applied to carefully investigate the resulting properties of synthesized materials. The challenge we face is to refine modeling, synthesis and characterization methods to improve the performance characteristics of magnetic materials.

This Special Issue of *Metals* is aim to collect a series of works describing property-centric approaches where modeling is combined with experiments to refine our knowledge and work toward overcoming traditional performance barriers of bulk materials.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

Prof. Dr. Yong Zhang

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