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Metal Matrix Composites Reinforced with Carbon Nanomaterials

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

This Special Issue is organized to provide novel knowledge towards contributing to the effort of expanding the potential use of carbon nanomaterials in metal technology and industry. Special attention is given to manufacturing carbon nanomaterial–metal composites of enhanced mechanical properties and structural integrity.

This Special Issue may include all relevant theoretical, numerical, and experimental research or review articles which may address or discuss the following issues regarding metal–carbon nanomaterial composites (MCNC): (1) Structural properties and integrity; (2) Mechanical properties and behavior (regarding the elastic, plastic, fracture, impact, buckling, friction, wear, etc., response); (3) Interface characterization and improvement; (4) Synthesis and processing techniques; (5) Powder metallurgy; (6) Additive manufacturing; (7) 3D printing; (8) Fabrication control via artificial intelligence, machine learning, and other optimization methods; (9) Components design and optimization; (10) Lightweight alloys; (11) Structural applications; (12) Dispersion techniques of carbon allotropes in metallic systems; (13) Corrosion resistance.

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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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