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Metal-Based Composite Materials: Preparation, Structure, Properties, and Applications

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Message from the Guest Editors

Dear Colleagues,

This Special Issue is focused on analyzing modern trends and recent advances in the synthesis of new metal-based composite materials. Such composites are increasingly used in civil, automotive and aerospace engineering, shipbuilding, robotics, nuclear power, portable energy devices, biomedicine, electronic devices, and portable aircraft.

Non-ferrous metals are often used as the matrix of composites, aluminum, magnesium, nickel, titanium and their alloys, can act as modifiers with boron, carbon structures, borides, carbides, nitrides and oxides of refractory metals and high-strength steel. For high-temperature composites, tungsten or molybdenum fibers are used.

Despite the large number of scientific works, new methods for the synthesis of such composites in order to improve and optimize their structure and properties are still needed. In this regard, completed works of experimental and theoretical orientation, aimed at the development and optimization of methods for the synthesis of composite materials, as well as the search for new materials, are welcomed for inclusion in this Special Issue.

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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