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High Entropy Alloys: Trends and Future Challenges

Guest Editor:

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Message from the Guest Editor

High-entropy alloys have been proposed for nearly 20 years. This kind of alloy has multiple principle elements, subverting the traditional thinking of alloy design, and offers a very large compositional region with almost unlimited possibilities. During the last 20 years, the understanding of high-entropy alloys has continuously changed and progressed. At first, high-entropy alloys were strictly defined as those comprising five or more elements with exactly the same composition ratio. Later, it was found that this definition limited the development of high-entropy alloys, and only then did non-equiatomic high-entropy alloys and medium-entropy alloys come into being. We are still in the early stages of high-entropy alloys research, and we look forward to the greater potential of these alloys in the decades to come.

This Special Issue of *Metals* focuses on works related to high-entropy alloys towards industrial application. We hope that this Special Issue will include articles reporting research on high-entropy alloys giving impetus to their industrial application. Any research on the properties and structures of these alloys is more than welcome.

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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.

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