

Special Issue

Recent Advances of Diffusion Thermodynamics and Kinetics in Metallic Materials

Message from the Guest Editors

Diffusion is a phenomenon closely linked to the random thermal motion of atoms, resulting in a change in the macroscopic concentration profile. This process can be observed in different states of matter including gases, liquids, and solids such as amorphous and crystalline metals. The study of diffusion provides significant information about the atomic structure of materials and their defects, which is invaluable in several fields including materials science and engineering. Diffusion plays a critical role in controlling the rates of kinetic processes associated with the synthesis of materials, their modification, and their failure. Therefore, understanding diffusion mechanisms is crucial for the design and development of materials with specific properties and functionalities.

In light of the above, we are pleased to invite you to submit a manuscript for this Special Issue focusing on theoretical and experimental work related to diffusion thermodynamics and kinetics in metallic materials. Original research articles, communications, and reviews are all welcome.

Guest Editors

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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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