



## Phase Transformation and Properties of Metals and Alloys

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### Message from the Guest Editor

Dear Colleagues,

The purpose of this Special Issue is to present the state-of-the-art of understanding of the phase transformation and microstructure formation in metals and alloys to provide support for the knowledge-based design of advanced materials with desired properties. A wide range of phenomena and materials are in scope of interest: from steel and alloys up to modern functional compounds. Special attention will be paid to the problem of stability of nanoscale heterogeneous state that forms in many technologically important alloys and is crucially important for practical applications.

Original research papers and critical reviews are welcome, focusing on the following main topics: (i) thermodynamics and kinetics of phase transformations, as well as their roles in the structure formation and evolution in metals and alloys; (ii) ab-initio-based modeling of free energy, phase stability, and related properties of alloy phases; (iii) advanced approaches to atomistic modeling of phase transformation kinetics; (iv) application of theoretical tools to reliable simulations of microstructure formation and properties of realistically complex materials; and (v) multiscale and gap-bridging approaches that seek to bring together theoretical and experimental results.

Prof. Yuriy Gornostyrev

*Guest Editor*





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## Message from the Editor-in-Chief

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