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Advances in Multicomponent Alloy Design, Simulation and Properties

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Deadline for manuscript submissions:

closed (20 October 2024)

Message from the Guest Editors

Dear Colleagues,

Materials with versatile electronic, magnetic, and mechanical functionalities in extreme environments are in high demand; hence, the discovery of new materials and/or combinations of existing materials is essential. Conventional alloys generally relying on the presence of a single principal element and various minor constituents have been pushed toward their functional limits. Nearly two decades ago, new groups of materials, known as highentropy alloys (HEA) and medium-entropy alloys, were introduced. The utilization of a large percentage of multiple principal constituent elements created unique alloying and composition optimization processes, in which materials with functionalities surpassing existing alloys could be realized.

This Special Issue will bring together recent experimental and theoretical developments in the field of multicomponent alloys, including, but not limited to, alloy design and the electrical and magnetic, mechanical, and electrochemical properties of these alloys in bulk, single-crystal, and thin-film form.













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Message from the Editor-in-Chief

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