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Mechanical Properties of Intermetallic Alloys

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Message from the Guest Editor

Research on how plasticization affects the structural use of alloys on a matrix of ordered intermetallic phases has a long history. The features of intermetallic alloys are resistance to oxidation, carburization, and sulfation; their good corrosion resistance in seawater and molten salts; high specific strength at room temperature, which increases with temperature; and high level of resistance to abrasion, erosion, and cavitation.

The discovery of the causes of low fracture toughness and the development of methods to counteract this phenomenon have led to continuous progress in research on intermetallic alloys based mainly on phases from the equilibrium systems Ti–Al, Ni–Al, Fe–Al, Nb –Al and Mo–Si, for both structural and functional applications.

The Special Issue will discuss works focused on modifying the structure of intermetallic alloys and improving their performance, mainly in terms of mechanical properties. Topic of interest include improvements in manufacturing technology, thermoplastic treatment, and other technological treatments that alter the behaviors of these alloys under load under the conditions of the broadly defined stress field.



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Message from the Editor-in-Chief

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