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The Effect of Additives on the Fracturing of Alloys

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Message from the Guest Editor

Modern industrial applications demand excellent mechanical properties of structural materials. The desired characteristics are generally developed by extensive alloying or the design of composite structure. However, many composites, high-alloy steels, and alloys lack ductility, which results in their early fracture during processing or operation. To prevent the failure of metallic materials, it is important to investigate the effect of element composition and microstructure on fracturing. Experimental mechanical tests and fracture simulation using finite element modeling represent powerful approaches to determine the failure conditions. By applying both methods, researchers significantly reduce the time needed to find fracture conditions with high accuracy.

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Message from the Editor-in-Chief

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