Special Issue

Fracture of Heterogeneous Metals

Message from the Guest Editor

Significant developments have been achieved in recent years in processing advanced high-performance materials/components by combining different metals. Generally, two or more strengthening mechanisms are involved and interactive in these heterogeneous materials/components during deformation; these can be strain partitioning, strain transformation, interface constraint, additional hardening, back-stress strengthening, etc. Interestingly, materials with microstructural heterogeneity may exhibit much higher strength and ductility than the sum of separate unities as calculated using the rule of mixture, evading the strength–ductility trade-off dilemma in homogeneous materials. This Special Issue welcomes all kinds of articles working on the deformation and fracture of heterogeneous materials, while articles on the following topics will be given priority: 1. The fracture of high-performance heterogeneous materials; 2. novel fracture mechanism of interface between two metals; and 3. advanced technologies for connecting heterogeneous metals.

Guest Editor

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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

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