



Research Progress on Hydrogen Embrittlement and Fracture Mechanics of Materials

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Message from the Guest Editors

Hydrogen embrittlement (HE) is a problem of major concern in the engineering field. The synergistic action of a stress–strain state (applied load or manufacturing-induced residual stress) and the presence of hydrogen from diverse sources (manufacturing, environment, etc.) causes a premature failure in certain metals.

In this Special Issue, recent advances on the study of HE in metals are highlighted and discussed, including but not limited to the following: hydrogen damage (HD); hydrogen-enhanced localized plasticity (HELP); hydrogen-enhanced decohesion (HEDE); hydrogen-assisted fracture (HAF) and hydrogen-assisted cracking (HAC); hydrogen transport by diffusion and dislocation dragging; hydrogen and plasticity; hydrogen and dislocations; hydrogen trapping; role of stress–strain fields on HE; hydrogen-assisted fatigue; multiscale approaches to HE; computational approaches to the process of HE; microscopic approaches; fractographic analysis of the damage/fracture process.

It is our pleasure to invite you to submit a manuscript for this Special Issue. Full papers, communications, and reviews are all welcome.





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Message from the Editor-in-Chief

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