Special Issue

Failure and Degradation of Metals

Message from the Guest Editor

Metal degradation and ultimately failure has a significant impact on our society, from economic damage to physical injury. Metal components fail for a wide range or reasons. Ranging from bad component design, production process or maintenance, or they might not be intended to serve a specific purpose. Metal failure can occur unexpectedly and is often difficult to anticipate. It is important to identify the conditions and phenomenon that can lead to failure to avoid it in the future. Determining the root cause and mechanisms of metal failures is therefore of great importance. The metal failure includes: overload due to mechanical stresses, fatigue, corrosion, creep, wear, internal defects, production defects, thermal stresses, overheating, phase transformations, and hydrogen embrittlement, among others These failures can mean a simple end of life for a component and its replacement, or it can mean a catastrophic failure. The Special Issue focuses on the degradation mechanisms that cause metal failure, as well as case studies of failure.

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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