

Special Issue

Alloys: Hydrogen Embrittlement Behavior and Corrosion

Message from the Guest Editors

Hydrogen embrittlement is a central mechanism underlying a wide range of failure phenomena in structural materials, affecting critical components across many industries. It arises not only from the direct interaction of metals with hydrogen atoms or molecules but also from corrosion processes, encompassing a broad spectrum of scenarios. Recent advances in both experimental techniques and computational simulations have progressively unraveled the fundamental mechanisms of hydrogen embrittlement, bringing us closer to fully understanding this long-standing challenge. In light of these developments, we invite contributions to this Special Issue that explore new insights, methodologies, and applications in the study of hydrogen embrittlement. We particularly encourage submissions from both early-career and experienced researchers, fostering a vibrant exchange of ideas and accelerating progress in this important field.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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