



Hydrogen Embrittlement of Metallic Materials: Past, Present and Future

Guest Editor:

Prof. Dr. Jesús Toribio

Fracture & Structural Integrity
Research Group (FSIRG), Campus
Viriato, University of Salamanca
(USAL) E.P.S., Avda. Requejo 33,
49022 Zamora, Spain

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submissions:

closed (31 July 2019)

Message from the Guest Editor

Dear Colleagues,

This Special Issue seeks work on the following topics (but is not limited to them):

- Hydrogen embrittlement (HE); Hydrogen degradation (HD); Hydrogen damage (HD).
- Hydrogen enhanced localized plasticity (HELP).
- Hydrogen enhanced decohesion (HEDE).
- Hydrogen enhanced delamination or debonding (HEDE).
- Hydrogen assisted fracture (HAF) and hydrogen assisted cracking (HAC).
- Hydrogen transport by diffusion and dislocational dragging.
- Hydrogenation *versus* cracking. Coupled effects. Effect of history.
- Hydrogen and plasticity. Hydrogen and dislocations. Hydrogen trapping.
- Hydrogen deformation interactions. Role of stress-strain fields.
- Effect of cyclic loading on hydrogen embrittlement. Hydrogen assisted fatigue.
- Fracture and structural integrity at all scales in a hydrogen environment.
- Computational approaches to the process of embrittlement or degradation.

Accordingly, original articles, review articles, and technical reports covering the topic of hydrogen embrittlement/degradation/damage are invited.





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Editors-in-Chief

Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

Message from the Editorial Board

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.

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Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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