



14th International Conference on Fracture
June 18-23, 2017
Rhodes, Greece



**Special Symposium Announcement:
Hydrogen Embrittlement: Past, Present and Future.**

Organized by:

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Hydrogen embrittlement is a phenomenon of material degradation present in many engineering materials working under aggressive environments, thereby promoting fracture and compromising their structural integrity. Apart from the classical name of hydrogen embrittlement, many names have been used in the past, such as hydrogen degradation (Panasyuk, Andreikiv) or the dual terms coined by Birnbaum and Gerberich: hydrogen enhanced localized plasticity (HELP) and hydrogen enhanced decohesion (HEDE).

The topics of the Special Symposium include, but are not limited to:

Hydrogen embrittlement (HE), hydrogen degradation (HD), hydrogen damage (HD)
Hydrogen enhanced localized plasticity (HELP) and 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.
Multiscale approaches to hydrogen embrittlement.
Fracture and structural integrity at all scales in a hydrogen environment.
Computational approaches to the process of embrittlement or degradation.
Microscopic approaches. Fractographic analysis of the damage/fracture process.

Please send by email your expression of interest with the title of your presentation together with the name, affiliation and email address of the corresponding author and the names of the co-authors before 22 October 2016 to:

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Abstract must also be submitted online **before 31 October 2016** through the ICF14 website (<http://www.icf14.org>) assigned to this specific Special Symposium named **Hydrogen Embrittlement: Past, Present and Future.**