materials

an Open Access Journal by MDPI

IMPACT FACTOR 3.2

Indexed in: PubMed

CITESCORE 6.4

Influences of Hydrogen Effects and Corrosion Damages on Long-Term Service Safety of Energy Pipelines

Guest Editor:

Prof. Dr. Wenyue Zheng
Centre for Materials Service Performance, University of Science and Technology Beijing, Beijing 100083, China

Deadline for manuscript submissions:
closed (20 May 2023)

Message from the Guest Editor

Stress corrosion and hydrogen embrittlement are important causes for underground pipeline failure during long-term service, often resulting in catastrophic accidents and property damage. With the rapid development of hydrogen energy, much attention is put on pure hydrogen transportation and hydrogen–natural gas blend transportation using pipelines. Due to corrosion and hydrogen effects, and in the case of hydrogen pipelines, the coupled effects of these two mechanisms, the long-term safety of high-pressure pipelines deserves a refreshed focus. In this issue, the microscopic mechanisms of related degradation processes, safety assessment of affected structures, and control methods of aging of pipelines are addressed by researchers from different parts of the world.

Please view more details, including submission entrance ("Submit to Special Issue" option on the left side of the website), via the Special Issue website at:

https://www.mdpi.com/journal/materials/special_issues/service_safety_pipelines

Prof. Dr. Wenyue Zheng
Guest Editor

materials

IMPACT FACTOR 3.2 | Indexed in: PubMed | CITESCORE 6.4

an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.
Journal Rank: JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
𝕏@Materials_Mdpi