Special Issue

Studies on Long-Term Aging of Steel

Message from the Guest Editor

This is the Special Issue about “Studies on Long-Term Aging of Steel”. Most steels are attractive for mechanical structures in chemical and energy industry components due to their good corrosion resistance, weldability, and mechanical properties at high temperatures. However, these mechanical facilities have been used in severe working conditions such as high temperature, high pressure, and cyclic loading. Structural components designed for severe high temperature and pressure environments at power and chemical plant facilities deteriorate during their operation due to microstructural variations, such as phase transformation, coarsening of secondary phases, generation of intermetallic phases, the recovery of dislocations, and microcrack initiation and propagation. These microstructural variations have led to growing safety and integrity concerns. Additionally, desirable or undesirable unforeseen states may occur during service, which may influence the material state or behavior. Therefore, it is indispensable to understand the mechanism of long-term aging and the microstructural variations of each steel.

Guest Editor

Dr. Chungseok Kim

Department of Materials Science and Engineering, Chosun University, Gwangju, Republic of Korea

Deadline for manuscript submissions

closed (20 April 2022)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/55252

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

About the Journal

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.

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

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)