



Corrosion of Reinforced Concrete Structures in Civil Engineering and Architecture

Guest Editors:

Dr. David M. Bastidas

ROSEN USA, Inc., 14120 Interdrive
East, Houston, TX 77032, USA

Prof. Dr. Jose M. Bastidas

National Center for Metallurgical
Research (CENIM), CSIC, Ave.
Gregorio del Amo 8, 28040
Madrid, Spain

Deadline for manuscript
submissions:

closed (10 November 2022)

Message from the Guest Editors

In an attempt to overcome limitations associated with the service life of materials, corrosion engineering know-how and research efforts are key for designing smart sustainable construction materials, thus guaranteeing corrosion resistance and structural integrity in civil engineering and architecture.

New coating formulations and surface treatments are also being developed and used for protection against corrosion of reinforced concrete structures. Current efforts focus on developing more reliable lifetime predictive models that combine mechanical and electrochemical processes while also considering corrosion initiation and propagation stages.

Different corrosion protection and management strategies have been implemented, such as stainless steel reinforcements, corrosion inhibitors, smart coatings, cathodic protection, and new geopolymer cementitious materials. Advanced electrochemical monitoring and characterization techniques are enabling the fundamental understanding of thermodynamics, reaction kinetics, and transport mechanisms governing corrosion phenomena of steel in concrete.





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 & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)