Special Issue

Corrosion Properties and Mechanism of Steels

Message from the Guest Editor

Economic losses caused by corrosion are estimated to be 3%–5% of gross domestic product in developed countries. Corrosion damage affects products made of various metallic materials, but the main group of products are structures made of steel. In terms of maintaining the required service life of structures or equipment, it is necessary to understand the corrosion damage mechanism, evaluate the impact on reliable service and propose appropriate measures.

This Special Issue therefore focuses on the interconnection between the corrosion properties, the corrosion damage mechanism of steel structural elements and ensuring the required service life of the structural part or the entire construction. The types of structures are not strictly limited; articles may address the corrosion damage of:

- Bridge constructions;
- Technological constructions and equipment;
- Pipelines;
- Structural or non-structural elements of buildings.

In terms of the material, this Special Issue is limited to various types of steel, in particular to:

- Carbon structural steel;
- Low-alloy steel;
- High-performance steel;
- Stainless steel.

Guest Editor

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Message from the Editorial Board

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.

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