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Corrosion Behaviour of Duplex Stainless Steels

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Message from the Guest Editors

Dear Colleagues,

Duplex stainless steels (DSSs) are steels with austeno-ferritic microstructure with a relevant scientific and applicative interest as they have a favourable combination of mechanical properties, weldability and high corrosion resistance in different environments. The corrosion properties of duplex stainless steels depend upon the alloy chemical composition and the degree of homogeneity of passivating alloying element distribution in the two phases.

This Special Issue collects research studies related to all aspects of DSS corrosion behaviour: from the study of the influence of the chemical composition on the alloy corrosion resistance to the evaluation of the effect of secondary phases formation during thermal aging or welding, from new information on DSS applications in aggressive environments, to the development of innovative alloys coupling high performances and moderate costs. In particular, we particularly welcome research on innovative lean DSSs, owing to their increasing applicative interest.

Dr. Eng. Federica Zanotto
Dr. Andrea Balbo
Guest Editors

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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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