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Advances in Corrosion Protection by Coatings

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Message from the Guest Editors

Coatings are a very important way of protecting metals against corrosion in many applications. Therefore, the variety of coating methods is relatively broad. Metallic coatings may be used as barrier-type layers, such as nickel-based coatings, or can even provide cathodic protection for an underlying metal, such as zinc-based coatings on steel. Pretreatments are used to provide good adherence and inhibit the delamination processes of organic coatings. In addition, inhibiting compounds and nanocontainers can be added to coatings to bring about self-healing properties. Finally, inorganic coatings, such as anodizing layers and PEO (plasma electrolytic oxidation), can serve as barrier layers on light metals.

This Special Issue is devoted to the corrosion protection of metallic substrates by means of innovative and protective coatings, including their elaboration, morphology, surface characterization, and corrosion protection performance, using electrochemical techniques and/or aging tests.



