Special Issue

Surface Engineering & Coating Technologies for Corrosion and Tribocorrosion Resistance—Volume II

Message from the Guest Editor

Corrosion is one of the most damaging and costly material degradation problems in industrial settings. It leads to economic losses equivalent to 3–4% of the GDP of an industrialised country every year. Many materials derive their corrosion resistance from passivity, i.e., the formation of a passive film at the surface. Any damage to the passive film during service can lead to accelerated corrosion, which in turn can lead to accelerated wear. Thus, tribocorrosion is also a common degradation phenomenon in industry. For decades, efforts have been made to tackle the grave challenges of corrosion and tribocorrosion. Among the many techniques developed, surface engineering and coating technologies are the most effective because material degradation due to corrosion is a surface- and subsurface-related phenomenon. A surface engineering and coating system is a composite system comprising the surface layer, the subsurface zone and the substrate. Through the proper design and implementation of the surface coating, subsurface and substrate as a system, the corrosion and tribocorrosion resistance of engineering materials can be considerably enhanced [...]

Guest Editor

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