

Special Issue

Surface Modification for Improving the Performance of Engineering Components

Message from the Guest Editors

Mechanical/structural components' degradation phenomena are responsible for the increasing cost of maintenance and downtime in industrial applications. Hence, to ensure the performance of machines and devices and to increase the efficiency and reliability of products and processes, various surface modification methods have been proposed so far. Surface engineering modification is a challenging task to improve the resistance of metals to oxidation, thermal degradation, wear, corrosion, static, and fatigue mechanisms. Surface modification strategies to improve different properties of engineering components may consist of thermal, thermochemical, chemical, or galvanic treatments, etc. Therefore, the proper material and surface modification method is to be thoroughly evaluated according to the substrate material of the component, the predicted loading, and environmental conditions. The main topics of interest include, but are not limited to:

- Study of the microstructural characteristics of engineered surfaces;
- Tribological and mechanical evaluation of traditional and 3D-printed components;
- Recent developments in technologies of surface modification.

Guest Editors

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About the Journal

Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

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