Special Issue

Using Optimization Techniques and Artificial Intelligence in Improving Quality of Coatings

Message from the Guest Editors

Coating technologies are widely applied in many different industries, such as in gas turbine engines, to protect important parts from various extreme environmental conditions. The life span of coatings is short because of the mismatch in material properties between the different layers, mechanical load cycling, and thermal loads. Therefore, fatigue and fracture analysis for coatings has a significant effect on improving the life span of the systems. Optimization techniques and artificial intelligence should also be applied to significantly enhance the quality of coatings. The scope of this Special Issue includes:

- the application of coating techniques;
- strategies for increasing the manufacturing quality of coatings;
- the application of fatigue and fracture analysis technology in operational processes;
- experimental technology used to confirm fatigue and fractures in the operational process;
- the use of optimization methods and artificial intelligence to mitigate fatigue and fractures.

We look forward to receiving your support and contributions.

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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