

Advanced Coatings for Resisting Fretting Damage

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Message from the Guest Editors

Fretting (small amplitude reciprocal motion) is observed in various components, including aerospace, automotive, nuclear, and biomedical components. For example, fretting wear and fatigue occur in the dovetail connection of an aero-engine. Fretting wear is found in automotive components (e.g., electrical connectors) and nuclear components (the contact surface between a fuel rod and a grid). Fretting corrosion is observed in total hip prosthesis. Although fretting is found in a variety of components, practical solutions to minimize fretting damage are limited, including low friction coatings, surface treatments, optimal contact geometries, and so on.

This Special Issue aims to present new coating materials and techniques to resist fretting damage found in aerospace, automotive, nuclear, and biomedical components. This issue will allow us to understand the fretting phenomena found in various industries and seeks adequate solutions to fretting problem.



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Message from the Editorial Board

Now more than ever, research is called for to produce technologies and improve knowledge 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 at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. *Coatings* is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. *Coatings* publishes original research articles that report cutting-edge results and review papers on the hottest topics.

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