

Special Issue

Advances of Hard Material Processing Technologies for Surface and Interface Improvement

Message from the Guest Editors

As is well-known, hard materials are widely used in aviation and aerospace fields, especially for the load-carrying structures. The finishing surface quality is of great significance for the service performance of the parts. Therefore, advanced processing technologies, including machining and surface treatment, etc., are required to realize a fine finishing surface. The scope of this Special Issue will serve as a forum for papers on, but not limited to, the following concepts:

- Advanced processing (machining, surface treatment, etc.) technologies for hard materials, such as stainless steels, Ti-based alloys, super alloys, ceramics, composites and other new materials.
- Theoretical/experimental analysis of the benefits obtained from the above advanced technologies.
- Characterization of surface/interface properties, e.g., surface topography, residual stress, surface abnormality, lubrication, cooling, etc.
- Advanced tool design, such as micro texture, coatings, etc.
- Advanced lubrication and cooling methods in material processing interfaces, e.g., high-pressure coolant, MQL, Cryogenic methods, etc.

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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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