

Micro- and Nano- Mechanical Testing of Coatings and Surfaces

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Deadline for manuscript
submissions:

31 October 2024

Message from the Guest Editors

Dear Colleagues,

This Special Issue is devoted to capturing recent progress in in situ and ex-situ micro- and nanomechanical testing of inorganic coatings and will focus on quantitative aspects of these techniques as applied to the understanding of coatings' behavior under varying conditions.

This issue will cover but not be limited to the following topics:

- In situ mechanical property testing of coatings (where mechanical tests are performed in an imaging/characterization tool inter alia: synchrotron, electron microscopy, light microscopy, etc.);
- In situ and operando imaging and microstructural characterization during small-scale testing methods, inter alia: deformation, wear, fatigue, and fracture, etc.;
- In situ mechanical property testing and operando characterization of coatings in aggressive environments such as high/low temperatures, high strain rate, etc.;
- Metallic or other inorganic coatings and thin films (thermal/plasma spray, CVD/PVD, etc.);
- All industrial applications (aerospace, biomedical, electronic, nuclear, etc.);
- Novel preparation methods and techniques for small-scale testing (FIB, lithography, etc.).



mdpi.com/si/73445

Special Issue

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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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