

Coatings for Extreme Environments

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Message from the Guest Editors

Surface coatings have become an integral part of advanced materials. Surface coatings enhance material performance by providing protection from extreme environments such as high temperature, high stress, siliceous debris (sand and volcanic ash), oxidizing and corrosive species, and erosive environments. Thermal and environmental barrier coatings are enabling technologies for superalloy and ceramic matrix composite (CMC) components. Tribological coatings improve the life of components in erosive environments. Various coatings are used to improve the functionality of components. This Special Issue invites articles on the processing, characterization, and performance of coatings produced by a wide variety of technologies that encompass thermal spray (plasma spray, HVOF, etc.), kinetic based spray processes (cold spray, aerosol deposition, etc.), physical vapor deposition (EB-PVD, PS-PVD, etc.), chemical vapor deposition, and solution-based processes (slurry, sol-gel, etc.). Topics of focus include new innovations in materials and process technology, testing and evaluation, modeling, lifting, and emerging applications.



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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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