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Thermal Plasma Processing for Coating: Structural, Functional Properties of Thick Films

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Deadline for manuscript submissions:
closed (20 October 2023)

Message from the Guest Editors

Dear Colleagues,

This Special Issue will serve as a forum for papers includes but not limmited to the following concepts:

- Theoretical and experimental research, new ideas in thermal plasma processing of functional coatings using powder metallurgy route.
- Recent approaches toward single and multi-layer functional coatings made of pure metals or alloys.
- Thick coatings fabricated by a different process of thermal plasma technology including, among others, plasma spraying, spark-plasma sintering, and laser meting processing methods.
- Experiments and processing of high-performance coatings with mechanical, functional, tribological, and other extreme environmental applications.
- Understanding the functional mechanism of coatings through mechanical performance, self-healing, and description of their degradation mechanisms through the scratch test, indent point, wear test, and other dynamic loading conditions.
- A new methodology for considering the interplay relationship between mechanical, chemical, and electromechanical interactions of coating/substrate/environment and the ability to predict coating performance and/or reliability.

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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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