Special Issue

Advanced Functional Materials and Coatings in Additive Manufacturing: Challenges, Opportunities and Innovations

Message from the Guest Editors

We are currently witnessing a remarkable era in the field of Additive Manufacturing (AM) and coating technologies. AM, commonly known as 3D printing, has evolved beyond its initial prototyping applications to become a fundamental tool in various industries, including aerospace, automotive, and biomedicine. This evolution has been driven by its ability to create complex geometries and customized designs. Meanwhile, the field of coatings has seen remarkable progress, offering significant advancements in surface protection, performance enhancement, and functional versatility. The integration of AM with advanced coating techniques presents an exciting frontier, opening up possibilities for creating products with unique functionality. The topics of interest include:

- Integration and application of coatings in AM processes;
- Advanced functional materials enabled by coatings in AM;
- Coating techniques for enhancing properties of 3D-printed objects;
- Advances in multi-material AM for diverse coating applications;
- Fundamental and functional properties of surfaces and interfaces;
- Theoretical and computational modelling of surfaces and interfaces.

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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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