

Coatings: Status, State of the Art Manufacture, Applications and Future Trends

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Message from the Guest Editors

Dear Colleagues,

Over the years, industry and medical use of coatings has grown exponentially. This growth has been accompanied by an increase in the complexity and variety of the coatings, to meet diverse demands. Different manufacturing techniques and processes have been developed to produce coatings of a varied nature to meet the requirements of the gamut of operating regimes, such as ceramic coatings, to provide thermal protection in automotive components. The high-temperature operating regime of the reciprocating engine, a result of the protection of its metal components by the ceramic coatings, enables efficient operation of the vehicle and leads to a reduction in emissions.

This Issue seeks papers including, but not limited to, studies on the following coatings: ceramic coatings, thermal barrier coatings, solid lubricant coatings and diamond-like carbon coatings, discussed under one, or a combination, of the following headings:

- Status
- State-of-the-Art Manufacturing Techniques
- Applications
- Future trends
- Theoretical Modelling and Prediction of Coatings Failure/Reliability and Experimental Validation Methods



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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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