



New Trends in the Field of Surface Treatment of Thermal Spraying in the Present and Future

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Message from the Guest Editor

Dear Colleagues.

Thermal spraying technology enables the application and creation of metal, metal–ceramic, and ceramic coatings on all types of metal construction materials, regardless of the state of their heat treatment. For the application of thermal spraying, the chemical composition of the base material of the component to be coated and its heat treatment condition are not essential. Coatings prepared by thermal spraying technologies are used in virtually all industries that place increased demands on quality and durability, i.e., in the automotive, aerospace, agricultural, engineering, and biomedical engineering sectors.

Interest topics in the field:

Metal, metal–ceramic, and ceramic coatings in terms of novelty and benefit in basic and applied research;

The identification of changes in mechanical properties of coatings due to wear in various applications using thermal spraying;

Creation of predictive mathematical–physical models of thermal spraying;

Intelligent thermal spray systems with an emphasis on optimizing and controlling production technology.





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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.

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