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Recent Advances in High-Velocity Oxygen Fuel (HVOF) Coatings

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closed (28 February 2024)

Message from the Guest Editors

Dear Colleagues,

Many researchers have studied surface engineering to explore superior coatings deposited onto metallic materials to overcome deterioration. As a new thermal spraying technology, high-velocity oxygen fuel (HVOF) technology has the characteristics of fast particle flight speed, low temperature, and high bonding strength and is widely used in the machinery, electric power, metallurgy, aviation, and petrochemical industries for surface protection and repair of metal materials. HVOF spraying technology can extend the life of related components and provide a new way for the world's low-carbon green manufacturing.

This Special issue will serve as a forum for papers in the following concepts:

1. Experimental study and numerical simulation of HVOF spraying mechanism;
2. Study on the correlation between the preparation process of HVOF coating and coating properties;
3. Industrial applications of high-performance HVOF coatings;
4. Explore the many possibilities of HVOF coatings;
5. Research prospect of HVOF spraying and coatings.

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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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