

Special Issue

Tribological Studies on Diamond, DLC and Ta-C Coatings

Message from the Guest Editor

Due to their outstanding properties, carbon-based materials have found many applications in different branches of industry and continue to attract much interest in the scientific community. The variety of structures of carbon-based coatings calls for broader investigation, which will ultimately be beneficial, enabling a deeper understanding of their excellent tribological properties, including superlubricity. This Special Issue aims to bring together investigations on diamond, DLC and ta-C coatings with a focus on the understanding of the wear and friction mechanisms under different experimental conditions. Dangling bond passivation, graphitization, formation of self-generated transfer layer, etc., are the mechanisms under consideration. Experimental investigations, simulations and modeling (thermodynamic, first principles, etc.) of the tribological properties on the diamond, DLC and ta-C coatings, as well as comparative studies involved in these coatings, are welcome.

Guest Editor

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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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