

Tribological Studies on Diamond, DLC and Ta-C Coatings

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Deadline for manuscript
submissions:

closed (31 January 2022)

Message from the Guest Editor

Dear Colleagues,

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.



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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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