Special Issue

Functionalized Coatings with Super-Wetting, Intelligent Adhesion and Regulable Boundary Slip

Message from the Guest Editor

This Special Issue will serve as a forum for papers on the following concepts: Theoretical and experimental investigation, knowledge and novel discoveries on the interaction laws of interface wetting, adhesion phenomena, and boundary slip/lubrication. Comprehensive understanding of the coupling mechanisms among wetting, adhesion, and slip/lubrication through directional liquid dynamics of interface with super-wettability, tailorable adhesion/antiadhesion upon hydration/dehydration, slip/lubrication with a special super-wettable interface, and other more complex conditions. The latest developments in regulation methods considering the interplay between wetting/dewetting, adhesion/antiadhesion, and lubrication/wear, and the ability to predict field performance. Computer modeling and simulation to predict interface properties, coupling mechanisms, and reliability in coating preparation, with a focus on interface dynamic regulation of wetting, adhesion, and friction. Recent developments in multi-functional coatings produced by general and advanced manufacturing techniques.

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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