Special Issue

Polymer-Derived Ceramic Coatings

Message from the Guest Editor

The application of coatings derived from preceramic polymers such as polymer and ceramic, coatings, and composite and functional coatings is currently considered as the one of the most effective methods to tailor surface properties of materials to specific requirements for conventional and advanced technological applications. The polymer-derived ceramic (PDC) route is based on the synthesis of preceramic polymers as suitable and highly pure precursors to supply after pyrolysis ceramics with a desired phase distribution and homogeneity. The application of the coatings is possible with simple spry- or dip-coating techniques. Additionally, the transformation of polymer coatings based on the PDC route into ceramics is possible not only in a furnace but also by using alternative methods like laser radiation or plasma conditions. Ceramics with various pore scales can be also made from them. This Special Issue focuses on the current state-of-art of surface modification and ceramic coating development of polymeric materials, and scientific issues related to the synthesis, characterization, and application of PDCs-based coatings.

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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