

Special Issue

Biodegradable and Bio-Based Coatings for Functional Textiles

Message from the Guest Editors

Sustainable innovation has become a key driver reshaping the global textile industry, which has long faced challenges related to its high resource consumption and environmental impact. Biodegradable, bio-based coatings for functional textiles represent a frontier integrating renewable materials, advanced functions, and responsible end-of-life behavior. This Special Issue will bring together recent scientific and technological advances in the development, characterization, and application of biodegradable and bio-based coatings in textiles. We welcome the following topics:

- The development of bio-based and biodegradable coatings from renewable sources;
- The functionalization of textiles with sustainable coatings for enhanced performance;
- Processing techniques for coating application;
- The physicochemical and mechanical characterization of coated textiles;
- The durability, washability, and biodegradation behavior of bio-coated textiles;
- Life cycle assessment (LCA) for bio-based textile coatings and environmental impacts of these coatings;
- Applications in healthcare, sportswear, packaging, smart textiles, and protective clothing.

We look forward to receiving your contributions.

Guest Editors

Prof. Dr. Ana Paula Serafini Immich
Dr. Carlos Rafael Silva De Oliveira
Prof. Dr. Catia Rosana Lange De Aguiar

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Coatings
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
coatings@mdpi.com

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About the Journal

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.

Editors-in-Chief

Prof. Dr. Wei Pan

State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science & Engineering, Tsinghua University, Beijing 100084, China

Dr. Emerson Coy

NanoBioMedical Centre, Adam Mickiewicz University in Poznań, ul. Wszechnicy Piastowskiej 3, 61-614 Poznań, Poland

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