

Special Issue

Development of Low-Carbon Coatings/Materials and Intelligent Construction Protection Technology

Message from the Guest Editors

Rapid urbanization is driving an unprecedented demand for new buildings and infrastructure, leading to significant sustainability challenges. This scenario necessitates the urgent adoption of sustainable solutions in construction industry. Notably, there's progress in developing innovative low-carbon coatings and materials that significantly lower the embodied carbon footprint of structures. Additionally, the integration of intelligent construction technologies—such as Building Information Modeling (BIM), IoT sensors, robotics, automation, artificial intelligence (AI), and advanced data analytics—is transforming project delivery methods. This shift enhances operational efficiency, boosts productivity, optimizes resource management, and contributes to sustainability goals. This Special Issue “Development of Low-Carbon Coatings/Materials and Intelligent Construction Protection Technology,” aims to explore scientific advancements driving these transformations. We invite original articles on the topics such as green coatings, microbial modification, life cycle assessment, and AI in construction.

Guest Editors

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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.

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