Special Issue

Superhydrophobic Surfaces: Wetting Phenomena and Preparation Methods

Message from the Guest Editor

The preparation of superhydrophobic surfaces has seen remarkable diversification, encompassing a wide range of techniques tailored to specific materials and applications. These include chemical etching to create microscale roughness on metallic substrates, sol-gel synthesis for depositing ceramic-based coatings with controlled nanostructures, electrospinning to fabricate polymeric nanofiber mats with inherent hydrophobicity, and vapor deposition methods for precise control over surface chemistry and morphology. Additionally, bioinspired approaches have led to innovative fabrication strategies that combine roughness and low surface energy in novel ways.

In this Special Issue, we will showcase the latest advancements in the understanding of wetting phenomena on superhydrophobic surfaces and the development of cutting-edge preparation techniques. We welcome original research articles that explore fundamental aspects of wetting mechanics, surface characterization, and durability, as well as reviews that synthesize current trends, challenges, and future directions in the field—from environmental applications to industrial uses.

Guest Editor

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Deadline for manuscript submissions

31 May 2026

Surfaces

an Open Access Journal by MDPI

Impact Factor 2.9
CiteScore 3.4

mdpi.com/si/252334

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About the Journal

Message from the Editor-in-Chief

Surfaces and interfaces are ubiquitous, and their relevance in Chemistry, Physics, Catalysis, Materials Science & Engineering, Nanoscience, Biology and Nanomedicine is nowadays well acknowledged. Similarly, surfaces cannot be neglected when targeting applications in many strategic fields, such as sensors, energy conversion and storage, environmental and food science, and medical devices.
Surfaces is a new Open Access journal that will provide rapid publication of scholarly articles on studies related to surfaces and interfaces. Its mission is to publish cutting edge articles and conference proceedings and organizing special issues to highlight outstanding research on specific topics, encouraging the application of a rigorous Surface Science-based approach to many complex interesting phenomena and breaking boundaries among different disciplines.

Editor-in-Chief

Prof. Dr. Gaetano Granozzi
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