Special Issue

Nanocoating for Antibacterial Applications

Message from the Guest Editor

The control and prevention of infections and diseases caused by bacteria and microbial pathogens represents a great challenge because microorganisms are present everywhere and can be spread through air, water, and all kinds of surfaces. Some of the commonly used antimicrobial agents include antibiotics, disinfectants, antiseptics, nanoparticles, metal ions, active polymers, naturally derived antimicrobials, and so on. Nevertheless, the extensive and careless use of antibiotics and disinfectants has led to the growth of new strains of antimicrobial-resistant microorganisms, thus dramatically worsening the antimicrobial problem. Preventing the bacterial colonization of surfaces is a strategy for limiting the spread of infection. Antibacterial coatings have become a very active field of research, taking into account that bioactivity is linked to surface properties. The present Special Issue of *Nanomaterials* is aimed at presenting recent advances in the design, formulation, and preparation of antibacterial nanocoatings addressed to protect surfaces against microbial contamination.

Guest Editor

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Deadline for manuscript submissions

12 September 2025

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/184124

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mdpi.com/journal/nanomaterials

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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