

Special Issue

Advanced Antimicrobial and Bioactive Coatings for Broad-Spectrum Protection

Message from the Guest Editors

Infectious diseases remain a major global challenge, contributing significantly to morbidity and mortality. Increasing global connectivity, demographic shifts, and climate changes are facilitating the rapid spread of pathogens, exacerbating the risks of infections in both community and hospital settings. In response, the development of advanced antimicrobial and bioactive coatings has gained increasing attention due to their potential for large-scale microbial control. Smart antimicrobial coatings offer innovative solutions for infection prevention. These coatings can exhibit biocidal or biostatic activity but also face challenges related to compatibility with commonly used cleaning and disinfecting agents. Furthermore, ensuring their efficacy under real environmental conditions requires the standardization of methodologies for evaluating antimicrobial performance, toxicity, and physicochemical stability. We welcome contributions focusing on novel antimicrobial coating materials, including nanotechnology-based solutions, as well as advancements in mechanisms of action, compatibility, safety, efficacy, and standardized testing methods.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

There are very few fields that attract as much attention as scientific endeavor related to antibiotic discovery, use and preservation. The public, patients, scientists, clinicians, policy-makers, NGOs, governments, and supra-governmental organizations are all focusing intensively on it: all are concerned that we use our existing agents more effectively, and develop and evaluate new interventions in time to face emerging challenges for the benefit of present and future generations. We need every discipline to contribute and collaborate: molecular, microbiological, clinical, epidemiological, geographic, economic, social scientific and policy disciplines are all key. *Antibiotics* is a nimble, inclusive and rigorous indexed journal as an enabling platform for all who can contribute to solving the greatest broad concerns of the modern world.

Editor-in-Chief

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