

Special Issue

Antimicrobial Agents Based on Nanomaterials

Message from the Guest Editors

This Special Issue is devoted to reporting the latest developments in nanomaterials, capable of combating microorganisms such as bacteria and viruses. Around the world, the surge in bacterial diseases is causing serious health threats and potential other problems. The emergence and global spread of bacterial resistance to currently available antibiotics highlights the urgent need for new alternative antibacterial agents. In recent years, the metal ion release and photodynamic and photothermal effects of nanomaterials have shown positive efficiency in eliminating bacterial resistance and proliferation. Nanomaterials with surface plasmon resonance, photocatalysis, structural complexity and optical properties have been used to control the release of metal ions, and generate reactive oxygen species and heat for antibacterial applications. The properties of nanomaterials provide an opportunity to explore and enhance their antibacterial activities for clinical applications. For this Special Issue, we invite authors to contribute original research or review articles on the application of nanomaterials as antimicrobial agents or for antimicrobial drug delivery.

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