Special Issue

Frontiers of Antimicrobial Nanoparticles

Message from the Guest Editor

Infectious disease still represents a significant challenge in health care, being one of the major causes of mortality in the world. In addition, the use of many conventional drugs is hampered by a lack of efficacy, emergence of resistance, adverse effects, and high costs. In this context, nanotechnology plays a key role in improving the efficacy of existing drugs by the use of nanoengineered drug delivery systems. Nevertheless, other relevant applications of nanoparticles are found in antibacterial coatings for implantable devices and medicinal materials to prevent infection and promote wound healing, as well as in bacterial detection systems. This Special Issue is aimed at covering recent advances in the synthesis, assembly, mechanistic understanding and uses of nanotechnology applied to the development of novel systems for the prevention, detection and treatment of microbial infections. Several classes of antimicrobial nanosystems are discussed: Antibacterial polymers Antimicrobial drug delivery systems Inorganic-polymer hybrid nanoparticles Antibacterial coating

Guest Editor

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Message from the Editor-in-Chief

As the premier open access journal dedicated to experimental organic chemistry, and now in its 25th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts and novel materials. Pushing the boundaries of the discipline, we invite papers on multidisciplinary topics bridging biochemistry, biophysics and materials science, as well as timely reviews and topical issues on cutting edge fields in all these areas.

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