Special Issue

Physical Anti-Bacterial Nanostructured Biomaterials

Message from the Guest Editors

Antimicrobial surfaces are receiving a significant amount of interest, particularly over the last five years. Surfaces, such as those are being developed, are one method to stem the increasing prevalence of microbial contamination of medical and industrial surfaces. In recent years, certain nanostructured surfaces have been shown to exhibit high levels of biocidal action, with this behaviour arising from physical, rather than chemical, action. Such surfaces include those containing particular nanotopologies, including those that are found on some insect wing surfaces, such as those of cicadae, damselflies and dragonflies. The activity of these surfaces has been shown to arise from interactions of a physical nature, where the nanostructures on the substrates disrupt the cell wall structure of the attaching pathogenic cells. This Special Issue of Materials will report on recent advances being made in the identification and development of the nanostructured biomaterials that exhibit anti-bacterial behaviour, where the origin of this action arises from physical interactions at the cell–substrate interface.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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