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Recent Advances in Catalytic Surfaces/Films: Bacterial Inactivation and Biomedical Applications

Guest Editors:

Prof. Dr. John T. Kiwi

Prof. Dr. Roberto Comparelli

Dr. Irina Levchuk

Dr. Christophe Ruis Espírito Santo

Deadline for manuscript submissions:
closed (30 June 2020)

Message from the Guest Editors

Films reported during the last few years have increasingly reported a more effective bacterial inactivation kinetics, adherence to the substrate, mechanical resistance to friction, thermal stability, and long-operational lifetime, making this type of research an area of central attention in the biological/biochemical field.

In this Special Issue, we welcome studies on:

a) Work addressing the inactivation of bacteria (Gram+ or Gram-), virus, fungi and algae;

b) Catalytic/photocatalytic materials leading to the inactivation of biological toxic agents in the dark without the need of an external energy source (light, temperature) or activated by different light sources;

c) Work related to the surface of solid 3D-implants leading to disinfection as this area is lately revealing a high application potential;

d) Studies reporting the surface properties responsible for bacterial inactivation properties, such as: Size, shape of the catalytic sites, surface atomic composition, surface hydrophilicity/hydrophobicity, surface charge, roughness and identification of the surface, and bacterial functional groups.