Special Issue

Novel Antimicrobial Polymers: Synthesis, Properties and Applications

Message from the Guest Editor

Polymer-based materials have a superior status in all engineering sciences that attempt to address modern technology requirements. However, particular applications require them to have antimicrobial properties. Their antibacterial, antifungal, or antiviral activity is in demand in different sectors, such as medicine, dentistry, pharmacy, food packaging, clothing, coatings, furniture, and civil engineering. The achievement of novel bioactive products results from a long and complex process. It must comply with the criteria of physicochemical, mechanical, and biological properties. Combining bioactivity with desired elasticity, high durability, and biocompatibility is the most difficult. Special attention is also paid to manufacturing simplicity and cost efficiency. Recent research trends indicate the high potential of polymers containing chemical groups with bioactive properties. They can have high antimicrobial activity and good performance characteristics and are often characterized by lower cytotoxicity than polymer composites containing low-molecular-weight and physically dispersed biocides. [...]

Guest Editor

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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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