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Novel Antimicrobial Polymers: Synthesis, Properties and Applications

Guest Editor:

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Deadline for manuscript submissions:
20 January 2025

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. [...]

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Message from the Editor-in-Chief

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Journal Rank: JCR - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

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