



Production of Polyhydroxyalkanoate (PHA) Biopolymers from Waste Materials

Guest Editor:

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Message from the Guest Editor

Problems related to plastic waste and its negative effects on the environment have resulted in the emergence of a wide range of biodegradable polymer materials. Among the biomass-derived polymers, there is a growing interest in polyhydroxyalkanoates (PHAs). They are polyesters synthesized intracellularly by microorganisms and stored as reserve materials, allowing for survival under unbalanced nutritional conditions. Despite the highly satisfactory properties of PHAs, their production costs are still high compared with their synthetic alternatives. Therefore, there is a growing need for the development of novel microbial processes using inexpensive carbon sources. Such substrates could be waste materials that create problems with waste management and water pollution.

This Special Issue intends to cover the latest developments in the microbial synthesis of polyhydroxyalkanoates using waste streams. Topics will include the utilization of wastes for PHAs production by pure, recombinant, and mixed microbial cultures; new approaches to produce PHA in a sustainable fashion; novel microbes as PHAs producers; and polymer characterization.





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