Biopolymers Research

Abstract

Plastic usage has skyrocketed in today's fast-paced, convenience-driven economy. This has unintentionally resulted in a massive pile of plastic garbage harming the environment. Unfortunately, current methods of plastic waste management, such as recycling, dumping, and incineration, have all been shown to be inadequate. Recent breakthroughs in biodegradable polymers and microbial engineering strategies for more expeditious breakdown of plastic waste at composting facilities have resulted in a convergence on plastic waste management. This review study incorporates recent discoveries in the fields of biodegradable polymers and microbiological strategies for polymer waste management. Biodegradable polymer advancements have proven promising, particularly with aliphatic polyesters and starch in blends or co-polymers. Microbial techniques have been developed in order to identify microbial strains and comprehend their enzymatic breakdown process on polymers. New discoveries in