Biodegradable copolyester based blends: Properties and applications

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Biopolymers extracted from renewable resources such as plants, marine animals, insects have limited applications in large scale plastic production. Among various synthetic polymers, aliphatic aromatic copolyester i.e. poly(butylene adipate-co-terephthalate) (PBAT) has made its own place due to its good thermal, mechanical properties and biodegradability. It can be used in several applications, such as packaging materials (trash bags, food containers, film wrapping), hygiene products (diaper back sheets, cotton swabs), biomedical fields, industrial composting. PBAT’s compostability is its major advantage which contrasts to polylactic acid (PLA) where industrial fermentation conditions (60ºC) are required. Biodegradable polymers are modified for broadening their potential applications by various means such as blending and composites forming, which lead to new materials having unique properties including high performance, low cost, and good process ability. This lecture will highlight the properties and various applications of PBAT based biodegradable blends.

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