

Developing New Generation of Biodegradable Plastics

구준모[†], 전현열, 오동엽, 박제영, 황성연

한국화학연구원 바이오화학연구센터

(jmkoo@kriect.re.kr[†])

The severity of plastic pollution has reached a breaking-point where plastics from one continent can be found on the beaches of others. It has gained exceptional interest since the nature of this pollution has a direct impact on the health of soil, atmosphere, ocean, and human life that would be passed onto our next generation as a legitimate threat. Currently, the world is facing such cumulative responsibility by banning non-degradable or non-compostable products. However, the durable, light, and easily moldable properties of plastic have provided such convenience that it has become an essential part of everyday life. Thus, finding a compromise to resolve plastic pollution and transiting from petroleum resources to biomass is a challenging task that can only be solved by biodegradable plastic substitution.

Herein, we propose a novel understanding and development of a new generation of biodegradable plastic that has outstanding mechanical performance and controllable biodegradation.