

January 18, 2023

Toyobo wins Chemical Society of Japan Award for Technical Development for 2022

Helping realize a circular economy with an eco-friendly aluminum catalyst for polyester polymerization

Toyobo Co., Ltd. has received the 2022 Award for Technical Development by Chemical Society of Japan (CSJ) for its work in the “Development and Industrialization of Novel Aluminum Catalysts for Polyethylene Terephthalate.” The CSJ, Japan’s biggest chemical society, has presented this award, which recognizes outstanding achievements in developing technology in Japan’s chemical industry, annually for the past 71 years.

In 2002, Toyobo developed the world’s first aluminum catalyst, TOYOBO GS Catalyst[®], for manufacturing polyethylene terephthalate (PET) resins, although general PET polymerization catalysts were composed of heavy metal such as antimony. In 2017, Toyobo signed a licensing contract* involving specific polymerization technologies and related patents with Thailand-based Indorama Ventures Public Company Limited, the world’s largest PET resin manufacturer, as part of its efforts to tap the global market. PET resins produced using TOYOBO GS Catalyst[®], containing no heavy metals, are eco-friendly. Also, these resins are less likely to deteriorate during repeated melting processes due to their excellent thermal stability; therefore, they are well suited for recycling.

Amid heightened global environmental awareness, recovery and reuse systems mainly for PET bottles have been rapidly established, and then PET resin recycling is expected to expand beyond bottles to fibers, films and molded items. Against this backdrop, the award was presented to Toyobo after CSJ gave high marks to TOYOBO GS Catalyst[®] as an innovative catalyst fundamentally improving the thermal stability and quality of PET resins, thus contributing to promote recycling. It was also evaluated that Toyobo has achieved global industrialization of the catalyst.

Taking the award as an opportunity, Toyobo will make further efforts to expand the sale of TOYOBO GS Catalyst[®] and commit itself to developing new technologies that can help realize a circular economy.

* Refer to Toyobo press release dated September 21, 2017, titled [“Toyobo promotes global use of its aluminum catalyst technology through polymerization technology licensing contract with world’s largest PET producer, Indorama Ventures Plc”](#)

Recipients of the Chemical Society of Japan Award for Technical Development for 2022

Maki Sato (Corporate Research Center)

Fuyuhiko Kubota (Films and Functional Materials Marketing Strategy Operating Department)

Shoichi Gyobu (Renewable Resources Business Development Department)

Shinya Kanetaka (Films and Functional Materials Marketing Strategy Operating Department)

Tamayo Sasai (Corporate Research Center)

*The affiliation is as of January 18, 2023.

About TOYOBO GS Catalyst[®]

TOYOBO GS Catalyst[®], developed by Toyobo in 2002, is the world’s first polyester polymerization catalyst using aluminum. It does not use heavy metals such as antimony. PET resins manufactured with the catalyst are highly transparent and less likely to deteriorate when repeatedly melted and molded due to their excellent thermal stability. Their eco-friendly features make them suitable for products such as plastic beverage bottles.



PET resins made using
TOYOBO GS Catalyst[®] (front)

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