

June 30, 2020  
Sanyo Chemical Industries, Ltd.

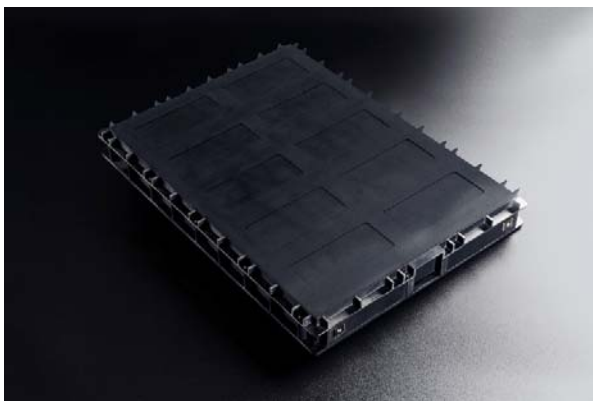
## **“All Polymer Battery” Startup APB Closes Financing from Toyota Tsusho**

Sanyo Chemical Industries, Ltd. (Kyoto, Japan, “Sanyo Chemical”) announced today its affiliate; APB Corporation (“APB”), a pioneer in development of next-generation lithium-ion batteries called "All Polymer Battery," closes undisclosed amount of funding from Toyota Tsusho Corporation (“Toyota Tsusho”).

APB is a startup developing and manufacturing the first large scale bipolar lithium-ion battery modules called All Polymer Battery. To realize high-quality batteries, we have developed a bipolar structure where current flows across the cell interfaces perpendicular to the electrode plane, and polymer as a basic material. The electrode material of All Polymer Battery is wrapped with gel-like polymer containing an electrolytic solution. Through the adoption of such technologies, our All Polymer Battery is characterized by such features as high reliability, high energy density, and innovative manufacturing processes at the same time. With fewer parts needed thanks to bipolar structure and polymer-based constituent material, All Polymer Battery has high flexibility in size and shape of the cells, which will help us to create thicker electrodes and larger cells.

The raised funds will mainly be used for building a new mass-production plant of All Polymer Battery. The funding will help us establish mass-production technology, and start manufacturing and sales of the batteries.

With Toyota Tsusho’s global network, we will expand our marketing and distribution channels.



All Polymer Battery module  
(Approx. 550 x 400 x 50 mm)



Inner structure  
Bipolarly connects 40 battery cells in series

**About Toyota Tsusho Corporation :**

Toyota Tsusho has long development its business with functions tailored to customers' needs and with original added value by leveraging its general trading and project management company functions, such as information collection and the logistics and financial functions necessary to import / export and broker domestic business transactions. Toyota Tsusho are also engaged in the development and investment business, working with partners all over the world to accelerate investment in fields in which future growth is expected. More information, please visit <https://www.toyota-tsusho.com/english/>

Since: July 1948

President: Ichiro Kashitani

Head Office Location: 9-8, Meieki 4-chome, Nakamura-ku, Nagoya

**About APB Corporation**

Since: October 2018

CEO: Hideaki Horie

Business Area: R&D, production and sales of lithium ion batteries

Head Office Location: 1-3-9 Kanda Sudacho, Chiyoda-ku, Tokyo