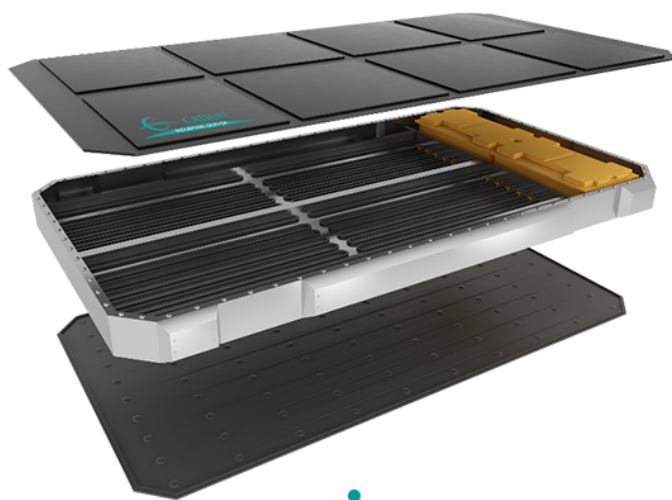


Cathay Biotech's Progress Report in Bio-based High Temperature Polyamides (PPA) and Composite Technologies

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Reflecting on 2023, Cathay has achieved milestones in high-temperature polyamide technology and produced high-performance thermoplastic fiber composites. We lead the charge towards sustainability and low carbon downstream solutions in logistics, transportation, new energy, and construction industry.

In 2023, Cathay has successfully developed a one-step bio-based high-temperature polyamide preparation method, validated on a 5000-ton pilot line. This innovative technology brings a groundbreaking reduction in the polymerization time, slashing it to less than 1% of the conventional process. Simultaneously, it allows for the controllable adjustment of the product melting point within the 290-310°C range. This breakthrough addresses longstanding challenges in the conventional high-temperature polyamide process, including high energy consumption, extended processing times, discharge difficulties, and easy decomposition and yellowing.

Expanding on this technology, Cathay Biotech has produced high-performance bio-based thermoplastic fiber composites with an impressive ultra-70% glass fiber content. These advanced composites find practical applications in the commercial trial production of semi-trailer underfloor plates, containers, construction templates, refrigerated containers, logistics pallets, and more. These products deliver environmentally conscious and low-carbon solutions to logistics and transportation, new energy, and construction fields.

Forecasts for the global bio-based composites market show a promising trajectory, with the market expected to exceed USD 30 billion by 2023. Anticipating a compound annual growth rate surpassing 15% in the next five years, the global market underscores the increasing recognition of bio-based composites. Looking ahead, Cathay Biotech's advancements in bio-based composites herald a bright future for the company's global standing. Cathay's commitment to excellence and sustainable practices demonstrates not only its technological prowess but also the determination to shaping a greener world.