

Recent Progress on Bio-based HMF's New Materials in China

Dr. John Zhang

yu.zhang@guoshengtech.com

Zhongke Guosheng(Hangzhou) Technology Co., Ltd

5-hydroxymethylfurfural (HMF) is the only bio-based platform compound with an aromatic ring, which has attracted widespread attention within academics and materials industry. The large scale and stable production and the cost control are the major hurdles of its commercialization.

The continuous production process of HMF developed by Zhongke Guosheng helps to achieve the low-cost and high-efficiency manufacture, which makes the large application of its downstream derivatives such as FDCA, THFDM possible. Analyze shows the current cost of HMF can achieve 4,500USD/ton and will decrease to 1,500USD/ton in the next 3 years, the low cost provides magnificent space for end market applications.

Large amount of market research, tests and end market evaluation have been carried out on HMF's materials, the most promising applications include bottle, film, fiber& textile, lithium battery separator and surfactant. Compared to petroleum-based material, key performance such as gas barrier, heat resistance, and anti-static, etc. have been improved significantly.

Detailed progress on current HMF's new materials industry situation and feedback from end users on the performance evaluation will be introduced in the presentation.