



NIPPON SHOKUBAI announces developing of a technology for
acrylic acid production from biomass resources

- Development of a high-performance catalyst for glycerine dehydration to form acrolein to pilot-demonstration as a subsidy project of
New Energy and Industrial Technology Development Organization (NEDO)-

NIPPON SHOKUBAI CO., LTD. [Tokyo Stock Exchange - TOKSE:4114.T] (“NIPPON SHOKUBAI”) hereby announces that NIPPON SHOKUBAI has developed a high-performance catalyst for manufacturing acrolein, an intermediate at manufacturing acrylic acid, from glycerine (“by-product glycerine”) obtained as a by-product when biodiesel fuel is manufactured from vegetable oils. Our new technology was adopted as a subject of 2009 Subsidy for Development Cost of Industrial Technology of Innovation Promotion Program of NEDO and demonstration by a pilot plant is aimed at from now on. The new technology enables to manufacture carbon-neutral acrylic acid from renewable resources.

<Background>

As global production rate of bio-diesel fuel grows, a production amount of the by-product glycerine increases, and development of its applications has been long expected. In addition, from the viewpoint of prevention of global warming, reduction of carbon dioxide emission has become a challenge in manufacturing and consuming chemical products.

<Our new technology and effects>

Nippon Shokubai has developed a catalyst that manufactures acrolein by gas phase dehydration with the by-product glycerine used as raw material. Acrylic acid can be subsequently obtained from acrolein by gas-phase oxidation, enabling us to convert raw material from petroleum sourced propylene to renewable resources. Consequently, the acrylic acid by the new manufacturing method can reduce emission of carbon dioxide, a cause of global warming, by about 1/3 compared to the petroleum-sourced raw material.

Nippon Shokubai has also developed a new solid catalyst and a new process for manufacture of biodiesel fuel with vegetable oils used as raw material, and the glycerine

produced by this method has a very high purity and can be used as raw material for manufacturing acrylic acid directly from acrolein without any purification process.

<Features of the new technology>

In recent years, development of catalysts for manufacturing acrolein from by-product glycerine has been actively carried out by many companies, but glycerine developed so far has many problems including productivity, yield, and catalyst life and has not yet been commercialized. Most of the catalyst developed to date had strong acidic properties but we have solved these problems by controlling the acidic properties of the catalyst.

<Deployment in the future>

This new technology was adopted as the project for 2009 Grant for Practical Application of Industrial Technology of Innovation Promotion Program of NEDO, and during the project period ending 1Q of 2011, a pilot plant will be constructed and the new technology will be demonstrated. The pilot plant is planned to be constructed at our plant site in Himeji, Japan where our acrylic acid plant is located, and after technological demonstration, production on a commercial basis will be projected.

Contacts

Investor & Public Relations Dept., NIPPON SHOKUBAI CO., LTD.

TEL: +81-3-3506-7477 E-mail: shokubai@n.shokubai.co.jp