

## Prize awarded to new membrane technology from Evonik

- German Federal Environment Ministry and BDI acknowledge SEPURAN® Green with the German Innovation Prize for Climate and the Environment
- Biogas processing considerably more efficient and environmentally friendly
- Evonik Executive Board Member Dr. Dahai Yu: "Overcome the challenges of the future with innovation"

Essen. With a level of purity approaching 99 percent, SEPURAN® Green high performance polymers from Evonik Industries make biogas processing much more efficient. For this achievement, the company has now received the 2013 German Innovation Prize for Climate and the Environment in the "Environmentally friendly technologies" category. The prize is awarded by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the Federation of German Industry (BDI). Dr. Dahai Yu, responsible for the Specialty Materials Segment in the Executive Board: "Innovations are a major contribution towards overcoming the challenges of the future. This also includes securing energy supplies practically from economical, ecological, and social aspects. With SEPURAN® Green, Evonik shows what the chemical industry can do to make this happen."

Biogas, which consists mainly of the gases CO<sub>2</sub> and methane, is regarded as an environmentally friendly form of energy. Before biogas can be fed into the natural gas grid it requires a considerable amount of processing and cleaning. The SEPURAN® Green membrane technology from Evonik now makes this process much more efficient and environmentally friendly.

"Our SEPURAN® membranes are made from a high performance polymer that we developed in-house," says Dr. Goetz Baumgarten, Head of the SEPURAN® business. "This polymer gives the membrane a particular property so that it is especially able to distinguish between methane and CO<sub>2</sub>."

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But the membrane alone is not enough. A conditioning process for biogas, tailored especially to the membranes from Evonik, makes optimum use of their separation properties: In a three-stage process, the methane can be concentrated out of the crude gas with just one compressor and an especially high methane yield. In addition, the methane-rich gas does not have to be compressed further before it is fed into the natural gas grid.

This membrane process is up to 20 percent more energy efficient than alternative methods. Besides, no auxiliary chemicals are required. No waste or wastewater are produced.

Evonik initially trialed SEPURAN® Green in a test plant beside the Vöckla River in Neukirchen, Austria. Since then, several biogas processing plants using SEPURAN® Green technology have been put into operation. Evonik is continuing to develop the SEPURAN® technology for new applications, such as separating hydrogen and recovering nitrogen from compressed air.

With the German Innovation Prize for Climate and the Environment the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the Federation of German Industry (BDI) acknowledge German industry's commitment to climate and environmental protection. This year was the fourth time that the prize has been awarded. The winners were chosen from among 97 contestants in five categories.

#### **Company information**

Evonik, the creative industrial group from Germany, is one of the world leaders in specialty chemicals. Profitable growth and a sustained increase in the value of the company form the heart of Evonik's corporate strategy. Its activities focus on the key megatrends health, nutrition, resource efficiency and globalization. Evonik benefits specifically from its innovative prowess and integrated technology platforms.

Evonik is active in over 100 countries around the world. In fiscal 2012 more than 33,000 employees generated sales of around €13.4 billion and an operating profit (adjusted EBITDA) of about €2.4 billion (excluding Real Estate in both cases).

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