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## Water treatment: Arkema and Polymem join forces to market a new ultrafiltration membrane technology

Arkema, a global chemical company and France's leading chemicals producer, and Polymem, a French SME specializing in the manufacture of filtration modules from hollow fiber membranes, have jointly developed a new ultrafiltration hydrophilic membrane technology to produce high quality water over the long term.

This ultrafiltration technology using membranes manufactured by Polymem from a brand new nanostructured Kynar<sup>®</sup> PVDF polymer developed by Arkema, makes the treatment of water using membranes more effective and less energy-intensive. The aim of the partnership is both to speed up the commercial development of this ultrafiltration membrane technology boasting durable hydrophilic properties, and to make it accessible to other water treatment players without delay. This technology has been proven by an ultrafiltration demonstrator manufactured by Polymem.

## The innovation: ultrafiltering membranes with long-lasting hydrophilic properties

This ultrafiltration hollow fiber membrane technology delivers the following benefits compared to conventional systems:

- Much finer filtration (from suspended matter to bacteria, etc., to viruses),
- Highly stable quality of post-filtration water regardless of quality of pre-filtration water,
- Membranes with excellent and long-lasting hydrophilic properties help speed up water circulation, resulting in faster flowing filtered water for constant energy consumption,
- Possibility to fully automate filtration systems.

## Membrane filtration: a fast-growing process

As a water treatment technology, membrane filtration is being adopted by many plants for recycling municipal and industrial wastewater, for drinking water, or for pre-treatment in seawater desalination. The water is fed at low pressure through thousands of semi-permeable and porous hollow fibers that retain suspended solids, impurities, bacteria and viruses. Today, one of the materials that is most widely used for these membranes is PVDF, in which Arkema is the world leader.

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A global chemical company and France's leading chemicals producer, **Arkema** is building the future of the chemical industry every day. Deploying a responsible, innovation-based approach, we produce state-of-the-art specialty chemicals that provide customers with practical solutions to such challenges as climate change, access to drinking water, the future of energy, fossil fuel preservation and the need for lighter materials. With operations in more than 40 countries, some 14,000 employees and 10 research centers, Arkema generates annual revenue of  $\in 6.1$  billion, and holds leadership positions in all its markets with a portfolio of internationally recognized brands.

Polymem, a French independent SME located in the Toulouse area, established in 1997 by two engineers specializing in hollow fiber membranes for water treatment, manufactures water filtration membranes and modules for municipal, industrial and commercial markets. With over 200 installations worldwide, the company's know-how for the sector's OEMs and distributors relies on a comprehensive range of both standard and customized filtration membranes and modules in order to design reliable and cost-competitive membrane systems.

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