

One step closer to bringing CO₂ capture technology to the marketplace

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May Britt Hägg, a professor in the Department of Chemical Engineering at the Norwegian University of Science and Technology holds the CO₂ membrane separator she and her research group have developed. Credit: Per Henning, NTNU

Air Products has signed an exclusive license agreement with the Norwegian University of Science and Technology (NTNU) for membrane technology for CO₂ capture.

NTNU, through its commercialization arm NTNU Technology Transfer, announced on 10 January that it has entered into an exclusive [license agreement](#) with Air Product. The agreement allows Air Products the rights to use NTNU's proprietary fixed site carrier (FSC) [membrane technology](#) in conjunction with Air Products' proprietary PRISM membrane [technology](#) for carbon dioxide (CO₂) capture applications.

The FSC membrane allows for a highly energy-efficient way of capturing CO₂ from flue gas and biogas to produce a high-quality CO₂ offgas. Air Products and NTNU foresee great potential for the application of this technology in areas such as coal-fired power plants and the cement industry, as well as other combustion processes.

"The combination of Air Products' PRISM membranes and NTNU's fixed-carrier technology moves carbon dioxide capture to a new level of efficiency that makes economic sense," said Charles Page, director of Air Products' PRISM Membranes division. "Air Products is committed to developing solutions that enable our customers to minimize the impact of their operations on the environment. We are confident that our license agreement with NTNU will provide Air Products the technology to manufacture gas membrane separators that are revolutionary in CO₂ capture."

Page also commented that the new agreement may open a new field of opportunity for the Norwegian affiliate of Air Products in Kristiansand.

This special membrane technology has been developed over the years at the Department of Chemical Engineering, NTNU, by Professor May-Britt Hägg and her research group and supported by Gassnova, the

Research Council of Norway (CLIMIT and FORNY2020) and the European Union. Air Products (Norway and U.S.), Statoil, Norcem, Alberta Innovates, DNV-KEMA and SINTEF have also been important collaborators.

"NTNU is proud to have the Air Products PRISM Membranes business, a significant international membrane producer, as the exclusive licensee of the FSC membrane technology," said Trond Gifstad, Head of Technology Licensing at NTNU Technology Transfer. "Air Products' industrial expertise and extensive commercial network is a perfect match to ensure that this technology reaches the market. This is a great example of how academia and the commercial sector can work together to bring new technology to market."

Provided by Norwegian University of Science and Technology

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