

## ECN starts HybSi<sup>®</sup> pilot at the test facility Plant One



On Monday afternoon, 23 May 2011, Maxime Verhagen, the Dutch Minister of Economic Affairs, Agriculture and Innovation (EL&I) opened Plant One, a new test facility for sustainable process technology in the Port of Rotterdam. This facility will be used to bridge the gap between the laboratory stage and full-scale production. ECN has set up a pilot installation at Plant One.

For information: [www.ecn.nl/news/item/date/2011/05/25/ecn-starts-pilot-at-the-test-facility-plant-one/](http://www.ecn.nl/news/item/date/2011/05/25/ecn-starts-pilot-at-the-test-facility-plant-one/)

### HybSi<sup>®</sup> membrane reactor

HybSi<sup>®</sup> pervaporation membranes can selectively remove water from a reaction mixture containing ethanol, butyraldehyde, 1,1-diethoxy butane and water including an Amberlyst solid catalyst. The conversion of this batch acetalisation reaction was increased from about 40% to 70%. The membrane performance remained constant over the 4 months test period, even in the presence of the solid catalyst. Besides the formation of these acetals – a bio-based diesel additive – applications include esterification reactions.

For more information, please see [www.sciencedirect.com/science/article/pii/S0376738811000500](http://www.sciencedirect.com/science/article/pii/S0376738811000500)

### First HybSi<sup>®</sup> membranes sold by Pervatech

After the successful implementation of the ECN technology, the membrane producer Pervatech has supplied the first square meters of HybSi<sup>®</sup> membrane modules to their customers for the industrial dehydration of solvents. These first modules are being used for process specific testing at pilot level, generating the data required for full scale plant engineering. First feedback is that the membranes perform satisfactory, long term piloting will commence soon, after which full scale plant realization is foreseen during this year.

### Contact details

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### Receiving this news flash

You receive this e-mail as you have shown interest in the past in the HybSi<sup>®</sup> membrane system. Please contact me, if you are no longer interested in receiving this irregular news flash.