



Welcome to the fourth newsletter of ROMEO.

After a beginning of 2017, which had been rich of meetings for the ROMEO's team, it was time to take stock of what has been accomplished since September 2015 and what still needs to be done.

ROMEO's partners, who are **developing a new reactor (two-in-one) concept using homogeneous catalysis and membrane technology to carry out chemical synthesis and downstream processing in a single step**, have submitted the Project Periodic Report in May 2017.

Reaction conditions for the membrane and purity requirements of the product have been determined, as well as the support structure for membrane modules. The first separation concept (separation of Hydrogen) has been extended and a new one has been set up to produce two valuable products: CO₂ (in the first step) and Hydrogen (in a second step). First results from catalyst tests on support structure are evaluated.

In order to develop a rigorous model for the membrane reactor module and the chemical processes in which the modules are applied, boundary conditions are now determined. With the objective to shift the developed process concept from feasibility towards a running process under near industrial conditions, basic principles and information for a life time cycle assessment for the module have been collected and a first assessment structure has been set up. Requirements on reactor module and feed conditions have been specified.

Although we all know that there is still a lot of work to build ROMEO's two demo plants, the report clearly shows that we have already made a huge step forward to achieve our goals. **I would like to thank again all of the ROMEO's workers for their great work!**

Due to a special occasion, we had to reschedule the **next Project Meeting in Madrid**, which was originally planned in October. According to partners' availabilities, ROMEO's next Progress Meeting will be held on the 15th and 16th of November 2017, in Madrid.

The reason for the rescheduling was a very special one: our colleague Miguel Bañares from CSIC is awarded doctor honoris causa of University of Caen Normandy (UNICAEN)! You can read more about it in this newsletter.

As usual, you can also find out more about people behind the ROMEO project. In this issue, you'll get a glimpse into the daily working life of Miguel, full Researcher Professor at CSIC in Madrid, Alexander, PhD candidate at the RWTH Aachen University in Germany and Jennifer Haßelberg, process engineer at Evonik (Germany).

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