



CAlytic membrane REactors based on New mAterials for C1-C4 valorization

CARENA is a large-scale integrating project funded by the EC

Interview with Marianne Ponceau – Linde, Germany.



Marianne Ponceau joined Linde in 1996 and she is currently working as Chemical Engineer in the Engineering division of Linde in Germany. Marianne studied the first two years chemistry in France and afterwards she had the opportunity to continue an engineering study in Munich. Her interest in chemical engineering came during two trainee stages at Linde. She has worked for Linde in the R&D department since 1996 and she is involved in various development processes dealing with olefin plants and their downstream processes. Her expertise is focused on alternative manufacturing processes to olefins.

A short Linde overview

In the 2014 financial year, the Linde Group generated revenue of EUR 17.047 bn, making it the largest gases and engineering company in the world with approximately 65,500 employees working in more than 100 countries worldwide. The Engineering Division (relevant division for the CARENA project) is a leading technology partner for plant engineering and construction worldwide. Its global success is built on its extensive process engineering expertise in the planning, project development and construction of turnkey industrial plants. Linde Engineering focuses on promising market segments such as plants for the production of hydrogen and synthesis gas, oxygen and olefins as well as plants for natural gas treatment.



What made you opt for a career as a researcher? How would you define your job?

R&D in the industry gives me a broad overview of techniques and processes that are currently used in the industry of those that will be state-of-art in the future. It is a good interaction point between chemistry, engineering, research and development. It allows me to interact with people with different background.

We'd like to catch a glimpse of your daily activities. What is an average day (or week) for you?

My daily activities are also interdisciplinary: from experimenting in the laboratory to simulating processes for R&D purposes, from experimental planning to cost estimation for R&D projects. Some activities are purely internal, but other are realized in cooperation with universities (for example in the frame of European funded projects) or with industrial partners.



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The CARENA project has been designed with a strong emphasis on multidisciplinary approach. What progress can be expected if chemists work in closer relation with other disciplines?

Working in an interdisciplinary field is always an enrichment. It allows you to better understand different points of view. It is sometimes difficult to speak "the same language", but if you make the effort to understand the other person, you will learn a lot and it allows new perspectives.

"Research-Industry collaboration opens also new perspectives"

CARENA brings together Research labs and industry. How do you view research-industry collaboration within the framework of the project?

Research-industry collaboration opens also new perspectives and makes a link between fundamental research and applied research. It is a good way to get the best of both sides.



CARENA in brief

Starting date: 1st June 2011
Project duration: 2011 – 2015
Number of partners: 19
Coordinator: Arend de Groot, ECN, the Netherlands
Programme: FP7-NMP-2010-LARGE- 4
Project Reference: GA 263007



What is the added-value of an EU project such as CARENA compared with other partnerships on the same topic you may be involved in?

CARENA offers a very interesting panel of universities and industries. It is also a good place for networking and for getting insight in new fields of research.

Last but not least, let's zoom out on broader themes. Sustainable development and environment issues are key concerns nowadays. How does membrane chemistry fit in the pattern? Would you say chemistry is going through major changes?

Sustainability is indeed a key factor nowadays. Membrane chemistry is a very interesting field that allows higher selectivity and hence higher efficiency, due to the targeted substrate delivery or product removal. **Research in this field has the potential to improve existing technologies or to find more efficient alternatives in the future.**

Thank you Marianne for answering my questions, and all the best for CARENA and the other projects you are involved in.

Interviewed by Laurence Bosch

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methanol
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