

Interview with Garhard Remmers
Innovation Technologist

Gerhard Remmers is Innovation Technologist at AkzoNobel Industrial Chemicals since 2011.

He graduated at the Twente University in the group of Inorganic Chemistry and Material Science. October 1st, 1980 he started his professional career as Salt (NaCl) Process engineer at the Hengelo-site (NL) of the former Akzo Salt & Base Chemicals Division (now Industrial Chemicals). Then, he became a researcher at the Akzo R&D department in Hengelo. Initially working on subjects related to the compaction of vacuum Salt and later as manager of a fully automated 24/7 Membrane Electrolysis Pilot Plant. As data processing was an important issue in this plant a temporary side step to the IT world was made as a Product and project Manager of Process Information Applications.

Returning to R&D again he became team leader scaling group at AkzoNobel Central Research in Arnhem.

Next he was senior researcher RD&I related to membrane electrolysis and its (by)products e.g. Sodium HypoChlorite (NaOCl) as well as involved in the setup of the process analytics of a full Remote Controlled Chlorine Production (RCCP). An innovative Chlorine electrolysis concept for industrial captive use of Chlorine avoiding Chlorine transports over the (rail)roads and brought jointly to the market by Uhde, UhdeNora and AkzoNobel Industrial Chemicals.



AkzoNobel is the largest global paints and coatings company and a leading producer of specialty chemicals.



AkzoNobel's branch participating in CARENA:

Headquartered in Amersfoort, the Netherlands, AkzoNobel Industrial Chemicals is Europe's largest producer of vacuum salt, merchant chlorine and caustic lye. State-of-the-art membrane electrolysis plants are used in Rotterdam, Delfzijl, Bitterfeld and in the near future Frankfurt and supply customers with chlorine mainly by pipeline. The Rotterdam plant has an annual production of 620,000 tons of chlorine, which makes it the largest single membrane plant in Europe and the biggest single merchant chlorine unit in Europe.

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

Well, I started as a process engineer in AkzoNobel - a job which is more day-to-day, a plant is build to produce and to make money. If a process or something else in production fails solutions have to be found on the short run. When a continuous plant is running 24/7 as planned then potential plant optimizations are to be elaborated. The scope of a process engineer is the plant. I learned a lot about technology in practice in these days. In research the subjects are far less day to day driven, they have a wider and deeper scope and a much longer timeline. There is much more variety in subjects resp. projects. This is more attractive to me. Nowadays I'm working as an Innovation Technologist at AkzoNobel Industrial Chemicals in Amersfoort. This job is really challenging to me as we try to have 'a look out of the box' and find new connections and extensions to our existing businesses on a mid to long term basis. Our participation in CARENA WP3 concerning Methanol/DME and DMC is a good example for this. Which also means open innovation: working with (inter)national partners belongs to the nicest aspects of my work these days!

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

No day is the same, sometimes days end up very different from the planning at the start...

So an *average office* day in Amersfoort (HQ, no labs) may somehow look like this:

~ 6.00 hrs. I am an early starter, so getting up at this time is no problem...

~ 7.00 - 8.30 hrs. Travelling from Doetinchem, where I live, to Amersfoort takes at least 1 hr or more depending on the traffic jams – 2,5 hrs is my all time high record...

~ 8.30 hrs. Up-dating with colleagues – incl. social chats

~ 9.00 hrs. Processing and writing emails, reading and writing reports, organizing, preparing and participating to all kinds of team and project team meetings, telephone conferences, f2f meetings with 3rd parties, etc.

~12.30 hrs. Lunch with colleagues in the canteen or go for a healthy walk with colleagues through Amersfoort, now and then also lunch meetings...

~13.00 hrs. Processing and writing emails, reading and writing reports, organizing, preparing and participating to all kinds of team and project team meetings, telephone conferences, f2f meetings with 3rd parties etc.

~ 17.00 hrs. Travelling back home – approx. 3 hrs is my all time high record... ☹

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

As AkzoNobel we have our own research, actually all of the AkzoNobel CARENA participants have their roots in the AkzoNobel RD&I. So we know that a good tuning of the mutual expectations in our collaborations is of the utmost importance. Every CARENA colleague is just a phone call or an email away...!

The first CARENA f2f meeting in Lyon was an excellent opportunity getting to know each other better and to take hesitations away. This is also one of the objectives of the next November WP3 f2f meeting at the AkzoNobel RD&I laboratories in Deventer in the Netherlands.

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CAtalytic membrane RE actors

based on

New mAterials for C1-C4 valorization

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

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

As long as I'm working as a chemical engineer at AkzoNobel there has always been a strong emphasis on multi-disciplinarity and synergy. I have experienced this as the best way to move on faster to the final objective.

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?

The added value of the EU project CARENA is shared knowledge and interest in the topics we are working on with known European institutes and companies in this area in order to move on faster.

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?

Sustainable development and environment issues are indeed key concerns nowadays. Membrane chemistry might fit well in this, unfortunately it is not an 'all mighty solution' when process conditions (e.g. P,T) are too severe...

Although in membrane electrolysis of NaCl we have seen substantial membrane improvements through the years!

Chemistry will go through major changes in the coming years. Renewable raw materials will increasingly be used and old and forgotten uneconomic processes will be actualized in order to compete with oil based chemistry. So it's going to be tough...!



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

CARENA in brief

Starting date: 1st June 2011

Project duration: 2011 – 2015

Number of partners: 19

Coordinator: Arend de Groot, ECN, the Netherlands

Project Reference: FP7-NMP-2010-LARGE-4

