

## Ammonium sensor

<b>Client</b>	ENTRANCE Centre of Expertise Energy
<b>Related project</b>	REMO lab project
<b>Start date</b>	All year
<b>Suitable for training course(s)</b>	Electrical Engineering (Major Sensor Technology)
<b>Learning Community</b>	

## Assignment description

The reduction of ammonia emissions in the agricultural sector is a hot topic nowadays. Within the REMO lab electrochemical methods are investigated to reduce the ammonia emission and concomitantly produce hydrogen. But in order to determine the efficiency of the electrochemistry, the ammonia concentration in the biowaste before and after the process has to be accurately determined. Our earlier research has shown that there is a direct relation between the ammonium ion content and the ammonia gas concentration on the top of a solution.

## Assignment

The assignment is to design and build a functional ammonium ion sensor. While the operational principle is known, the development of a proper solution for the practical application and validation of the solution has to be performed. How such a sensor should look like, what components are needed to make the product applicable in a real-life environment? The goal is to make a robust ammonium sensor that could be used in the experimental setup of the REMO lab.

## General information

<b>Final Product</b>	
<b>Location</b>	ENTRANCE, Zernikelaan 17, Groningen
<b>Parties involved</b>	
<b>Contact person</b>	Andras Perl <a href="mailto:a.perl@pl.hanze.nl">a.perl@pl.hanze.nl</a>
<b>Guidance</b>	
<b>Details</b>	

## What are we and where can you find us?

ENTRANCE is a learning knowledge community, in which students and teacher-researchers from various programmes work together with researchers, companies, governments, and civil society organisations to accelerate the energy transition.

ENTRANCE is the place where, as a student, you work together with lecturers, researchers, businesses, governments, and/or civil society organisations on complex issues. We do this at the following locations:

- Location Proeftuin, Zernikelaan 17
- Location Energy Academy Europe, Nijenborgh 6.

## What do we offer?

ENTRANCE offers you a multidisciplinary, inspiring learning, working, and research environment in which you can develop the competencies needed to shape and accelerate the energy transition. There is room for collaboration with professors, researchers, lecturers, and the professional field. In addition, you will be supervised by professionals who are part of the ENTRANCE Learning Communities (ELC).

## Contact us

Are you interested in the vacancy? Do you have questions or would you like to apply directly?

- Jacqueline Josse, Coordinator ENTRANCE Learning Communities.
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