



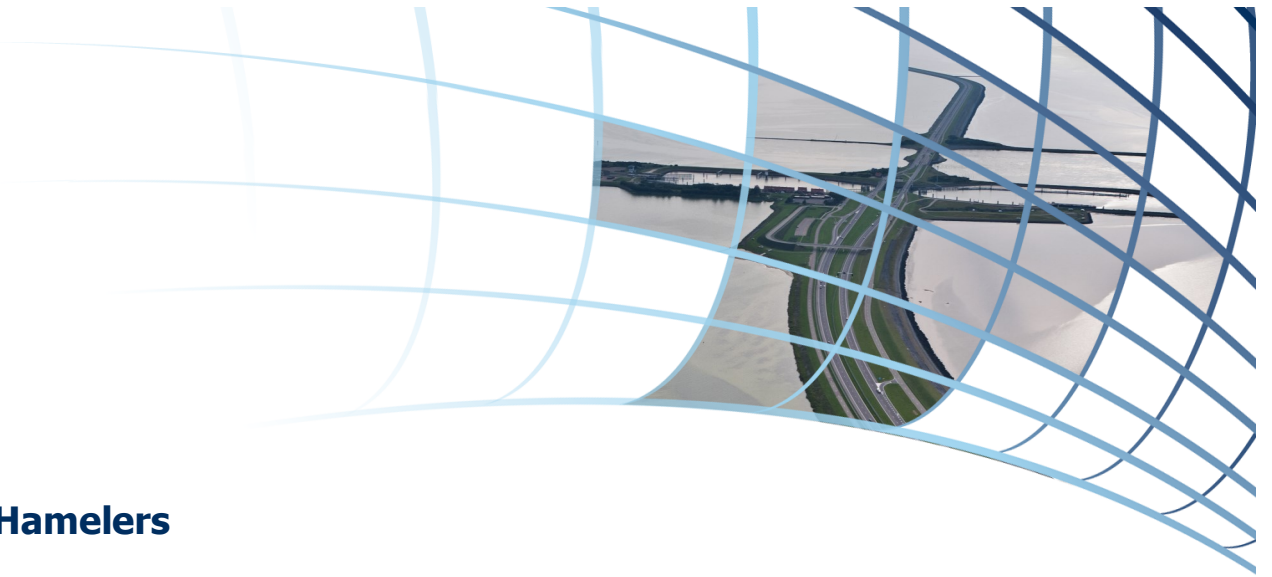
KIVI Energy Symposium

Compact conversion and storage of energy Special topic: Blue Energy

The 2015 KIVI Energy Symposium will be on the topic of compact conversion and storage of energy: Blue Energy. The purpose of this symposium is to provide a broad perspective on the potential of energy storage and to build a bridge between enterprises and universities.

This is a combined symposium of the KIVI Departments Applied Physics and Mechanics and the Strategic Area Energy from the TU/e .

| **24 September 2015** |
| **TU/e Zwarte Doos** |
| **13.30 - 17.00 hrs** |



Dr. ir. Bert Hamelers

WETSUS



Energy can be extracted wherever two streams of different composition mix. For instance in the situation of a river discharging into the sea, power equivalent to a two hundred meter drop of the river is available. This so-called Blue Energy is a substantial clean renewable energy source. Bert Hamelers will discuss the challenge to develop technology that is able to harvest Blue Energy in a clean, efficient and cost-effective way. Different technologies will be introduced and the development path of Reversed Electro dialysis will be discussed.

Prof. dr. ir. Kitty Nijmeijer

Universiteit Twente



Blue Energy or Reverse electro dialysis (RED) is a non-polluting, sustainable technology to generate power from mixing solutions with different salinity, i.e. sea and river water, using membranes. Recently, the first Blue Energy demonstration plant worldwide was installed at the Afsluitdijk in The Netherlands. Kitty Nijmeijer will discuss the scientific developments and design strategies for Blue Energy in relation to the practical application.

Dr. ir. Annemiek ter Heijne

Wageningen UR



Recovery of energy from wastewater is one of the key processes for a sustainable society. Annemiek ter Heijne will talk about the Microbial Fuel Cell, a clean, CO₂ neutral, and efficient technology to recover electricity from wastewater. Electrochemically active microorganisms are the key to this Microbial Fuel Cell, but also for the conversion of electricity into e.g. methane (natural gas).