

Greetings from the Center Management!

The establishment of MoZEES is well under way, after a successful kick-off on 20-21 March 2017. The Board and Management Team members are all in place, and are ready to contribute!

The timing of MoZEES is perfect, as many large countries and regions around the world are now setting “real targets” for reducing greenhouse gas emissions in the transport sector.

This is the first newsletter in a series of many. We wish to fill the newsletters with “tasters” of the activities in the Center, and highlights from our research on zero emission transport systems.

We wish you all a great summer!

Best regards

Øystein, Fride, Magnus, Erik, Katinka & Ragnhild

OUTREACH ACTIVITIES

One of the goals of the center is to make the MoZEES vision, *zero emission energy systems for transport*, become more known in the public domain and among key stakeholders. In order to achieve this, the Director, RA-leaders and several other key members and partners of MoZEES have participated in several open meetings, workshops, seminars, and conferences during the start-up of the Center.

HFC 2017

Center Director Øystein Ulleberg held a well-received presentation at HFC 2017 (the Biennial Hydrogen and Fuel Cells summit) in Vancouver 6 June. See the presentation [here!](#)



Øystein Ulleberg on the stage at HFC2017 in Vancouver. Photo: Bjørn Simonsen/NEL

Batteries, Hydrogen or Bio fuels?

Bellona, OREEC, and IFE/MoZEES invited to brainstorm about the future energy carriers in the transport sector in a workshop on 14 March. Board member Martin Kirkengen presented his views on the matter.



Mali Hole Skogen (OREEC), Ola Elvestuen (V), and Martin Kirkengen (IFE) discussing the future energy carriers. Photo: OREEC.

Hydrogen and batteries don't need to be either-or

MoZEES has received good publicity during the startup phase. In April the largest technical magazine in Norway, *Teknisk Ukeblad*, published an article on batteries and hydrogen for transport, including an interview with the MoZEES Director. The article can be read [here](#).

Aktiviteten vil bli delt i fire områder. NTNU vil lede forskningen på batterimaterialer, Sintef på materialer for hydrogenteknologi, mens IFE skal ta hovedansvaret for forskningen relatert til batteri- og hydrogensystemer. I tillegg vil TØI få ansvar for policy og teknisk-økonomiske analyser.

Det skal forskes på materialer og prosesser. Målet er å etablere «grønne jobber» i ny eksportrettet industri og nye løsninger for transport med spesielt fokus på maritime anvendelser.



Skiftes ut: Det meste av den gamle forskningsutrustningen i senteret skal skiftes ut med nye batterier og brenselceller. (Foto: ORV)

Snapshot of article in [tu.no](#)

NEW EMPLOYEES & ANNOUNCEMENTS

MScs. **Daniel Tevik Rogstad** and **Elise Ramleth Østli** will start their PhD studies at NTNU in August. Their projects focus on materials for Lithium-ion batteries; Daniel will be investigating Silicon anodes and ionic liquids, while Elise will be aiming at the development of water-based manufacturing routes for electrodes in an effort to stabilize the electrode/electrolyte interface.

MSc. **Ika Dewi Wijayanti** joined MoZEES as a PhD student at IFE and NTNU from 1 January 2017 and is working on Nickel metal hydride batteries.

MSc. **Mathias Henriksen** will embark on his PhD studies at USN in August, focusing on hazards – such as explosions – related to accidents with Li-ion batteries in transportation. The work will be conducted in close collaboration with FFI.



Daniel Tevik Rogstad



Elise Ramleth Østli



Ika Dewi Wijayanti



Mathias Henriksen



PhD position at UiO (collaboration with FFI) on thermal stability of cathodes is announced [here!](#)

A PhD position at NTNU focusing on fatigue of hydrogen storage tanks will be filled shortly, as will a researcher position at UiO on composite membranes for PEM fuel cells and electrolyzers.