4TU FAIR-battery challenge

Applicants: dr. Y. Tang, Mechanical Engineering, TU Eindhoven; dr. S. Faez, University of Utrecht; dr. M. Voors, Wageningen University & Research.

Type of funding: Community Activity

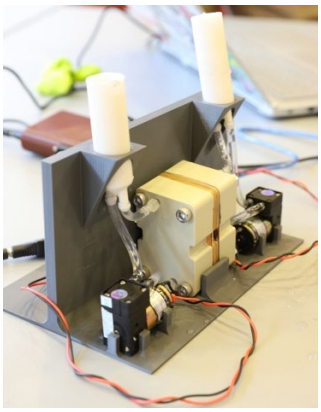
The proposal was to organize an event to connect 4TU research community that work on flow batteries and to stimulate cross collaboration between battery research and education at 4TUs.

The workshop “Flow4UBattery: Pioneering energy storage solutions” took place on April 8 & 9, 2024 on TU/e campus, with 86 participants. The first day was about in-depth scientific research via dedicated presentations, posters and discussions. There were 9 invited speakers: Prof. Roswitha Zeis (Helmhotz Institute Ulm), Dr. Maarten Voors (WUR), Dr. David Vermaas (TUD), Dr. Maik Becker (TU Clausthal), Dr. Evan Zhao (Radboud Univ.), Dr. Giacomo Marini (Univ. di Padova), Dr. Tim Tichter (TU Denmark), Dr. Alexey Lyulin (UT), Dr. Antoni Forner-Cuenca (TUe). The second day was for hands-on workshop of building flow batteries and lab tours. We provide all the materials and an open-sourced flow battery assembling guideline. The participants formed small groups to build an flow battery and test its performance right away.

Organization team

Scientific talks

Networking



Flow battery

Hands-on workshop

Lab tour

This workshop was a big success with all positive feedback from participants. What we also learned from this activity are:

- Redox flow batteries hold potential as a breakthrough energy storage solution,
- Active research on flow batteries is going on in the Netherlands,
- We have built a contact network of flow battery research,
- There is an inspired younger generation on this topic,
- There is a growing preference for open science, open-source hardware for flow batteries.

Plan for follow-ups

We have acquired funding from Center for Unusual Collaborations to organize a second flow battery workshop in 2025.