



# Master's Thesis

available in the field of

## Electrochemical Energy Storage

within the project *Flow-Hybrid-Capacitor* funded by the AWS under  
the Proof of Concept call.

**Context:** Work on the world's first flow hybrid capacitor. It consists of aqueous iodide-containing salt solutions with slurried activated carbon particles, simple separators and electrodes/current collectors made of carbon or steel. None of these cost-effective materials are critical raw materials and all are non-toxic/environmentally friendly.

**Your tasks:** You will be introduced to different methods for studying the properties of the electrolyte slurries. Practical work will include electrolyte production and characterization. You will use methods including cyclic voltammetry and electrochemical impedance spectroscopy and investigate the charging/discharging characteristics of hybrid capacitor cells with stagnant and flowing electrolyte (capacitor cycling). Analysis of your data will contribute to the successful development of this unique device, bringing it close to a commercial level.