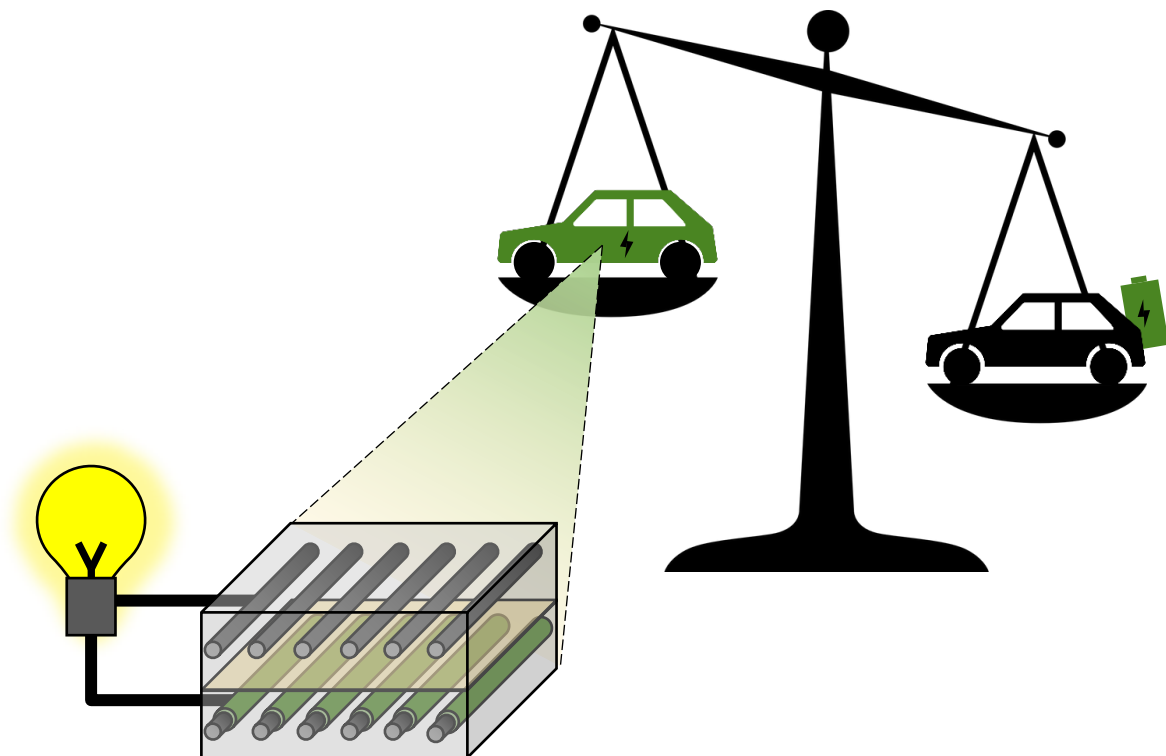


Master's Thesis Proposal:

Micromechanical Testing of Li-intercalated Carbon Fibres for Structural Composite Batteries

Carbon fibres can carry mechanical load and simultaneously store electrochemical energy. This multifunctionality is utilised in structural composite batteries to decrease the weight of electric vehicles and devices. Imagine that the hood of a car stores energy and no additional battery weight is needed. To realise this technique, we need to understand the relationship between load carrying and energy storing capabilities of carbon fibres.



In this master's thesis project we want to:

- Perform single fibre micromechanical testing on non-lithiated and lithiated carbon fibres
- Study single fibres in advanced electron microscope during micromechanical testing
- Develop a platform for in-situ Li-intercalation during micromechanical testing

You should have a background in materials science, applied physics or similar. The project will run during January 2021 – June 2021, and provide 30 higher education credits. The work is performed at Chalmers, in close collaboration with other researchers in the Structural Composite Battery Team.

For more information on the project or to apply, please email your application (cover letter and academic transcript) to Marcus Johansen, at the Department of Industrial and Materials Science: marcus.johansen@chalmers.se.