

## Bachelor Thesis

### Spatially resolved post mortem characterization of cycle aged 18650 Li ion batteries

Lithium ion batteries age while cycling and storing. The Ageing is highly governed by degradation processes especially on the graphite anode. The degradation is spatially localized and concentrated in the centre area of the electrode strip. This project focuses on the opening of Li ion cells and the characterization of the electrodes at different locations.

Cycle aged cells with different ageing states will be opened in a glove box and the electrodes will be separated and washed. Samples will be taken from the electrodes at various locations and characterised by means of chemical composition, microstructure and roughness.

The following characterization methods will be used:

- Microscopy: optical, SEM, AFM
- Impedance spectroscopy
- BET (pore size and specific surface area)

The candidate will be assisted during the project, developing an experience in ceramic processing technology and characterization methods. Master students with excellent course achievements have the possibility to apply for a fellowship.

For more information about the project please contact:

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