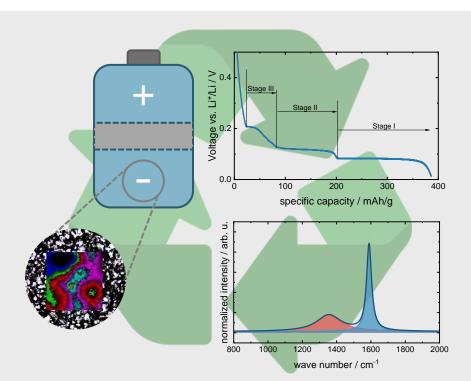


Institute of Energy and Process Systems Engineering





## Student/Master thesis: Acceptable Residual Impurities in Purified Battery Electrolytes

As part of a student project, the quality requirements of recycled electrolytes for reuse in lithiumion batteries are to be examined. Using suitable measurement methods, the influences of impurities will be identified to derive acceptable levels of residual impurities in purified battery electrolytes.

Through independent assembly and testing of battery cells using industry-relevant materials, along with common spectroscopic analyses (Raman and impedance spectroscopy) of the electrodes, you will investigate the impact of relevant residual impurities. The focus will be on the influence of contaminated electrolytes on graphite anodes.

The project imparts fundamental methods for the investigation of battery cells and materials, as well as the corresponding data analysis. Thus, this research provides a hands-on experience in the fields of battery technology and recycling.

What you can bring:

- Experience on lithium-ion batteries
- Interest in working partically
- Experience on spectroscopic methods

Starting date: as soon as possible

Student / Master thesis

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