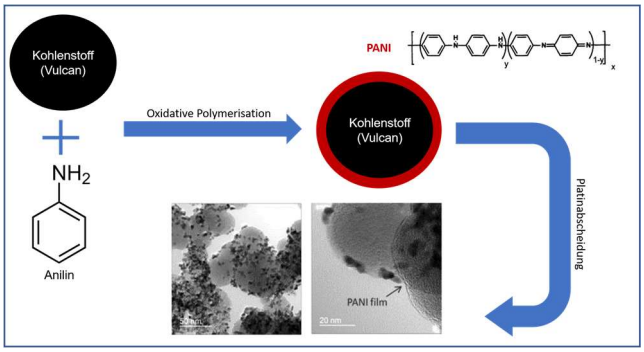
Technische Universität Graz
Institut für Chemische Verfahrenstechnik und Umwelttechnik

- ☐ Bachelor thesis
- ☐ Construction exercise
- ☒ Master thesis
- ☐ Paid master thesis
- ☐ Theoretical
- ☒ Experimental
- ☐ Constructive

Topic: **Synthesis and characterization of polyaniline-coated electrocatalysts for the polymer electrolyte fuel cell**

The polymer electrolyte fuel cell is currently being established on the market as an efficient and sustainable energy converter for electric mobility. Further increase in component lifetime is however necessary for large-scale market introduction. A particularly attractive approach to achieve this, is the coating of the corrosion-prone catalyst carrier (carbon) with polyaniline (PANI).



Innovative C@PANI/Pt catalysts are synthesized by oxidative polymerization in the presence of the carbon carrier and subsequent deposition of platinum. The influence of protonation/deprotonation of the amine/imide function and thickness of the PANI layer on the catalytic properties and corrosion resistance are investigated.

Contact: **Dipl. Ing. Maximilian Grandi,** Tel.: +43 (316) 873 – 7977,
E-mail: maximilian.grandi@tugraz.at
Prof. Viktor Hacker, Tel.: +43 (316) 873 – 8780,
E-Mail: viktor.hacker@tugraz.at
www.tugraz.at/fcsummerschool

Starting date: Immediately.