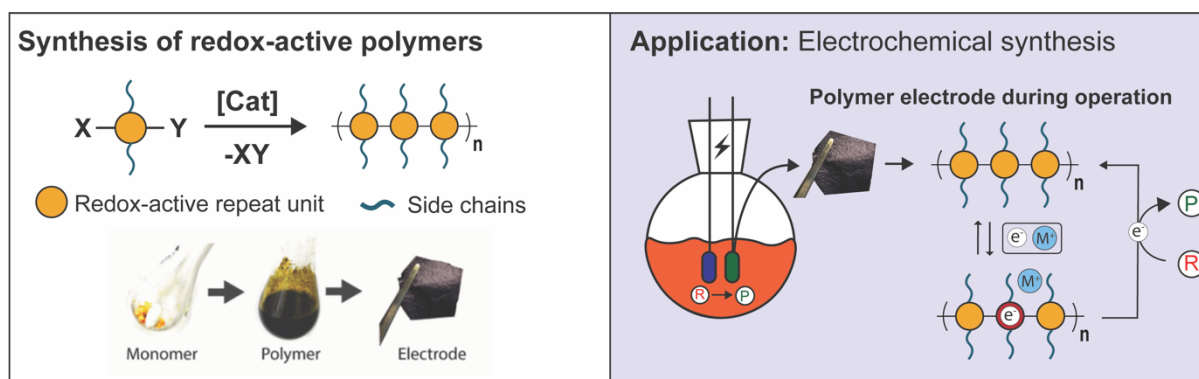


Are you motivated to support the development of clean technologies?

The **Giovannitti group** is actively looking for motivated **Master students for projects for 6 or 12 months** to synthesize redox-active polymers for electrochemical synthesis. Interested? Reach out and join our team!



The Project: This project develops tailor-made redox-active polymers to prepare electrodes for electrochemical synthesis. These new electrode materials will be employed as the active electrode material for electrochemical synthesis and are designed to undergo rapid electron transfer reactions. **The outcome of the project** is a highly active precious metal-free electrode material for reductive electrochemical reactions.



What you will do: You will synthesize redox-active polymers with state-of-the-art polymerization techniques. First, you will tune the energy levels of the polymers by varying the chemical composition of the repeat units of the polymer. Once you have identified the ideal polymer backbone, you will tune the local environment of the polymer by attaching functional groups, so-called side chains, to the polymer backbone. These side chains will increase the solubility of the polymer to process polymers from solution and also improve the transport of ions to develop bulk active electrodes.

What you will learn from us:

- State-of-the-art polymerization techniques
- Purification methods for polymers
- Chemical and electrochemical characterization techniques

After the completion of your master's thesis project, you will be able to synthesize redox-active polymers and understand structure-property relationships.

Skills to bring:

- Being curious and motivated
- Open for learning
- Training your colleagues
- Supporting others

This is a synthetic project - the majority of your time will be spent working within the chemistry lab.

Curious? Reach out to Alexander if you have any questions or apply here:

Alexander.Giovannitti@chalmers.se

www.gio-research.com