

Process considerations on the carbon cycle: Share of the different sectors, historical developments and approaches to mitigation

Topic suitable for Master Thesis (Bachelor Thesis)

The unchecked use of carbon in the chemical industry, energy supply and mobility has led to a threatening accumulation of CO₂ in the atmosphere.

The current material flows, the historical emissions that fill the atmospheric reservoir with CO₂ and concepts for the future are being worked out in order to achieve the two-degree target formulated at the UN Climate Conference in Paris in 2015 and the nationally agreed emission reduction targets.

CEET is pioneering the development, optimisation and application of functional materials for energy conversion and storage technologies. Given the global interest in reducing carbon dioxide emissions, several strategies on the path to climate neutrality need to be evaluated in order to achieve the global NET-ZERO targets. Based on these strategies, future technology research needs will be identified.

Tasks:

- Literature research, collection and preparation of data
- Describing and elaborating strategies to achieve climate goals (national, European and global)
- Analyse data and determine the need for technology research to contribute to reducing carbon emissions.