

CHILL Talent Office – Internship Circular Materials - Research in recycled plastic

Reincarnation: Analysis of recycled plastic

Background:

This project focuses on developing a standard method for analyzing recycled plastic. Recycled plastics are becoming increasingly important within the circular economy, yet the properties of these materials can vary. Therefore, it is crucial to thoroughly investigate and understand them.

The plastic is to be recycled by first shredding it and then injection molding it into a sample suitable for mechanical and thermal testing. Regranulation is not required.

Project objective:

The aim of this project is to gain insight into the mechanical and thermal properties of recycled plastics, ultimately enabling the establishment of a reliable analysis method.

Assignment description:

During this project, you will work with six different types of plastic. These materials will first be processed and subsequently tested.

1. Step 1: Material pre-processing

The plastic is first shredded (reduced in size). Next, the material is injection molded into test specimens. Regranulation via extrusion is not required (for the time being).

2. Step 2: Conducting tests

The resulting samples will be tested using various techniques:

- Tensile testing → strength and elongation
- Impact testing → impact resistance
- DSC analysis → melting temperature
- TGA analysis → composition analysis

A challenging and educational internship with good supervision.

A clear assignment or project is defined in consultation with you beforehand.

You can gain valuable experience.

YOU 360 program – Free participation in training sessions to develop your personal skills.

An internship allowance.

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