



Master Thesis in Chemistry and Polymer Technology

Advanced bio polyester depolymerization setup

CHASE is seeking a skilled and motivated young scientist willing to work on future proof topics dealing with sustainability and circular economy. You will be part of a multi-disciplinary team and acquire first-hand information on your selected topic and beyond.

We are offering positions for students with a finished BSc degree in the field of Chemistry, Physics, Polymer- or Process Engineering for pursuing their diploma/master thesis on a part-time basis (10 to 20h/week), limited to 12 months, to strengthen our team at the headquarters in Linz with immediate entry.

CHASE is a European Research and Technology Organization for Chemical Systems Engineering with its headquarters in Austria. We enable companies in the chemical process industry to make their production more energy-efficient, more resource-saving and more sustainable.

This master thesis focuses on developing and implementing a new reaction setup for the depolymerization of polyhydroxyalkanoates (PHA) in melt hydrolysis. Based on the knowledge of previous in-house results, this project aims at utilizing advanced lab facilities for the chemical depolymerization of selected biopolymers. In parallel, the gained insights are compared with existing kinetic models and used for the further development of such with focus on new polymer structures. The research project aims at enhancing the overall depolymerization efficiency and product selectivity and will support the development of a Digital Twin for chemical recycling of PHAs.

We are looking forward to hearing from you: personal@chasecenter.at

Reference number: 022

Application: until 15.01.2026

CHASE your future

You will contribute to the following tasks:

- Design and optimize a biopolymer depolymerization setup
- Benchmark this new setup with previous melt hydrolysis and investigate the nuances in reaction kinetics and modeling thereof
- Study synergy between renowned and new depolymerization methods
- Implement new analytical methods for monitoring the reaction progress

Your expertise:

- Passion for depolymerization kinetics and setting-up chemical experiments
- Experience in chemical technology and analytical methods
- Knowledge in chemical kinetics and engineering
- Benefit: first experience in data acquisition & analysis
- Good analytical and problem-solving skills
- Independent and structured workflow
- Effective communication skills in both English and German

CHASE your career

We are committed to providing a framework for your professional growth:

- Work alongside academic professionals to enhance your expertise in reaction kinetics, polymer chemistry and analytics.
- Earn a competitive salary while making impactful contributions to innovative research. The expected monthly salary is EUR 2.407,00 (on a basis of 40h/week).
- Play a key role in advancing sustainable recycling by developing and optimizing cutting-edge depolymerization methods for biopolymers.

For further information, please contact:

Gunnar Spiegel, Area Manager – Circular Process Streams
gunnar.spiegel@chasecenter.at

We look forward to receiving your application (cover letter, CV, academic certificates, employment references), including the reference number of the job posting, to the following email address: personal@chasecenter.at

By submitting your application documents, you expressly consent to the transmission of your application documents to the partners involved in CHASE.

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