




Master Thesis in Chemistry and Polymer Technology

Impact of contaminants on processing of post-consumer recyclates

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

We are offering positions for students with finished BSc degree in the field of Chemistry, Polymer or Process Engineering for pursuing their diploma/master's thesis on a part-time basis (10 to 20h/week), limited to 12 months. The expected monthly salary is EUR 2.407,00 (on a basis of 40h/week).

The aim is to explore the effects of temperature, shear rate, solvent, and contaminant concentration on the viscosity of virgin materials to improve solvent-assisted mechanical recycling processes. The project aims to advance understanding and optimization of this recycling process to make it more environmentally benign and aligned with circular economy principles.

For further details see next pages 



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CHASE your future

You will contribute to the following tasks:

- Investigate the influence of temperature, shear rate, solvent type, polymer type and contaminant concentrations on the processability of virgin materials.
- Work on a digital twin by modelling the material properties by analytical and heuristic models.
- Support the development of more efficient recycling processes that reduce environmental impact.
- Enhance existing recycling techniques by examining the interactions between polymers, solvents, and contaminants.

Your expertise:

- Proficiency in polymer characterization techniques
- Skilled in Data Processing and Experimental Design
- Knowledge in modelling of material properties
- Good analytical and problem-solving skills
- Independence, intrinsic motivation and structured workflow
- Effective communication skills in both English and German



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CHASE your career

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

- Conduct impactful research in sustainable technologies, contributing to a circular economy.
- Collaborate with industry experts and academic leaders, gaining practical experience.
- Receive a competitive salary for your contribution to the project and master thesis.
- Contribute to the development of solvent-assisted mechanical recycling methods that enhance environmental sustainability.



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