

Bachelor-, Student, Masterthesis

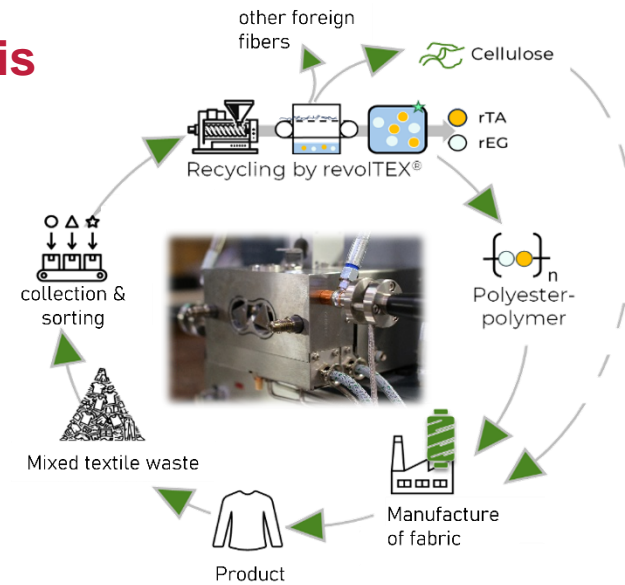
Chemical recycling of used textiles: The way to a closed-loop system

Despite growing awareness, textile recycling is still in its infancy: Recycled fiber accounts for only about 8.5% of the global fiber market, and only a fraction of that comes from true fiber-to-fiber recycling. Existing mechanical-thermal recycling processes often do not return raw materials to the original production process after processing, but instead use them for lower quality products. In particular, complex textile blends such as PET/CO (polycotton) remain a challenge because fiber blends, dyes, coatings, and contaminants make effective recycling difficult.

Experimental Laboratory Tests:

- Depolymerization of different PET/CO ratios in the laboratory vessel (see picture) under parameter variation
- Development of a methodology for assessing the quality of the cotton obtained and the resulting waste products
- Analytical studies (e.g. DSC; HPLC and others)
- Removal of contaminants

A personal presentation of the topic is possible at any time. The task and the scope of the work can be customized.



Start as soon as possible or by agreement.

Interested? Further questions?
Feel free to contact me ☺



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