

Improving digestibility of end-of-life textiles to create new cellulosic textile fibres

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Summary

There is an urgent need to develop more circular and sustainable textiles within the apparel industry. This project investigated the use of plasma-microbubble technology to pre-treat commercial cellulosic textile blends, facilitating their conversion into new cellulose fibres for textile applications.

Aims

- Assess plasma-microbubble reactor for chemical-free textile pretreatment
- Enhance sustainability while ensuring high-quality regenerated cellulose fibres for textile applications

Outcomes

- Textiles were pretreated using reactive species generated by gas plasma
- Tests indicated moderate changes in textile crystallinity
- Fermentation of pretreated samples yielded intriguing and promising results.

