

BlueYarn: bringing UK based seaweed fibres to the market

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Summary

The Blueyarn project aimed to modulate mechanical properties of the alginate-only based fibres to widen their applicability in the fashion industry. We have optimised the extraction and quality of *Saccharina latissima* alginates, and developed crosslinking methods for fiber stabilisation.

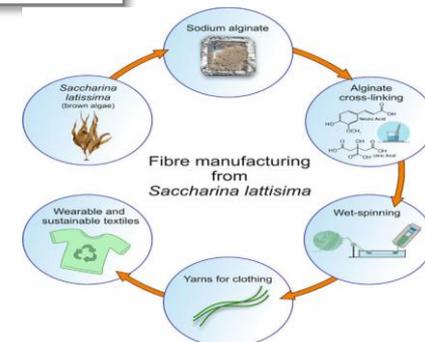


Aims

- Seaweed derived fibres represent a sustainable alternative to land-based products as seaweed cultivation does not compete for land, requires no input and is carbon negative
- We aim to optimise alginate extraction and produce fibres with good mechanical properties

Outcomes

- Sustainable extraction of alginates from *Saccharina latissima* (UK-farmed brown alga)
- Use of natural cross-linkers (ferulic acid and citric acid) to modulate mechanical properties of alginate fibres
- Production of strong fibres using different divalent ions



This project advances sustainable fashion by delivering seaweed-derived fibres with enhanced mechanical performance, potentially reducing reliance on synthetic textiles

Leonardo Gomez