



CALICO PROJECT

CANOE wins 2024 Refashion's Innovation Challenge



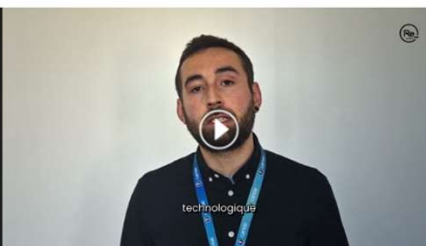
CANOE is a research and technology transfer center based in the Nouvelle-Aquitaine region, at Pessac, specializing in polymer material synthesis, formulation, and manufacturing processes for composites and advanced materials.

For over 10 years, CANOE has been actively involved in internal research projects and collaborative R&D initiatives aimed at developing cost-effective, low-environmental-impact carbon fiber for high-volume markets such as automotive, wind energy, sports, and leisure. This development is based on bio-based or recycled precursors.

A WORD FROM THE PROJECT MANAGER

«The challenges we're aiming to address in the Calico project involve giving a new life to materials that are, for the most part, destined for disposal at the end of their lifecycle.»

Xavier Solimando - R&D Engineer at CANOE



PROJECT'S 'CALICO' OBJECTIVE

Recycling and high-value recovery of non-reusable waste acrylic textiles into carbon fibers through solubilization, filtration, coagulation spinning, and carbonization.

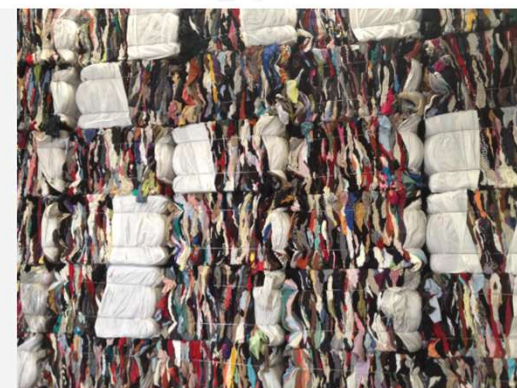
Type of CHF covered: Acrylic clothing textiles

Recycling pathway: Chemical

Recycling process: Solubilization

Applications: Automotive, wind energy, sports, and leisure

Output product: High-value-added carbon fiber



Textiles recycling

Financial support from Refashion:

100 910 €

Project duration: 30 months

The project in 3 steps

1. Collection/sorting and material characterization of used acrylic textiles
2. Solubilization, filtration, and coagulation spinning at the laboratory scale
3. Pilot-scale spinning and carbonization of recycled acrylic fibers (PAN)